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ABSTRACT

This module contains basic material to enable the workshop facilitator to teach concepts in agricultural marketing to Peace Corps volunteers. Introductory materials include general suggestions for the facilitator, a checklist, and a suggested timetable for a two-week workshop. The course is organized by 11 concepts: needs assessment, market familiarization, basic terms and concepts, marketing in action, the production-marketing-consumption system approach to agricultural commodities, characteristics of commodity systems, behavior of market participants, simulating a marketing system, identification of alternatives in previously identified marketing situations, role of Peace Corps volunteers in agricultural marketing, and sharing resources and plans for action. To teach each concept, objectives, teaching techniques, materials needed, suggestions to the facilitator, handouts, worksheets, and visual aids are provided. Lectures are minimal; content is presented primarily through learning experiences. An appendix contains additional visual aids, a bibliography, and supporting material. (YLB)

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To The Facilitator

This module contains basic material to enable you to teach concepts in agricultural marketing. We analyze agricultural marketing as a system where all of the functions that cause a commodity to flow from producer to final consumer are viewed as interrelated components. Likewise, the module regards the learning group as a system. Although smaller teams or groups may work at a task, it is the task of the entire group to analyze and define relationships and functions of the production-marketing-consumption system, sharing resources as much as possible in the group.

Sharing knowledge, ideas, and insights is encouraged through active involvement of each person. Lectures are minimal. Content is presented primarily through learning experiences. Content comes from resources in the group, knowledge of facilitators, publications, handouts, worksheets, visuals, experiences in the marketplace, simulation, etc. The group is given an opportunity to analyze the learning experience and then to apply the principles to their own situations.

While suggestions to the facilitator, handouts, worksheets, visuals, and suggested teaching techniques are included to teach each concept, you will still need to inject your own personality, your own creativity in assisting the group to become cohesive, accepting each person as a person, affirming ideas within the group, and challenging them to explore the depth of each issue. The workshop should proceed smoothly and spontaneously. You will probably need to find techniques to keep the sessions lively and to assist when the group is struggling with a concept. The module is organized by concept, with objectives, techniques, and materials needed for teaching each concept. To this framework you may add your own ideas, host country knowledge, and information on situations in other countries. It also allows you the freedom to build in fun for the participants and yourself as you facilitiate the workshop.

The pilot workshops for this module were held in Costa Rica, the Philippines, and Papua New Guinea. Revisions were based on these experiences. Since groups differ in motivation, personality, and knowledge, you as a facilitator must be flexible enough to use optional sessions or discard sessions to meet time constraints and group member's needs. The group may reject sessions, or parts of sessions as not useful (the interview role playing was rejected in one of the pilot workshops). You must be flexible enough to move on to something more constructive, unless you ascertain that members of the group are misjudging their need, or did not fully understand the inclusion of a certain exercise in the workshop.

Remember that the system set up in the classroom is much like a marketing system. It is consumer demand that pulls a product through the system. It is very difficult to push a product (information) through the system unless there is a demand or you are successful in creating a demand.

In the pilot workshops the facilitator used signs posted around the room written on newsprint. They helped create atmosphere or a special climate of openness to the methods being used. While the signs were not necessarily referred to by the facilitators, the participants were aware of them and apparently internalized them to some extent.

The signs used were:

> Everything doesn't have to happen at the front of the room.
>
> Teaching is not talking, and learning is not listening.
>
> It is not possible to teach anyone anything--it is only possible to arrange for someone to learn. (Another way to say that it is demand for information that pulls the "product" through the system.) (Or another way of saying that the learner needs to take responsibility for his/her own learning.)
>
> None of us is as smart as all of us.
>
> I hear and I forget
> I see and I remember
> I do and I understand

In the pilots, two facilitators taught the workshop. One played more of a process role, keeping the sessions going, handling the group building processes, pointing out process to the group, and discussing their planning for action in the context of the social action process, and the change agent's role in bringing about planned change.

The other facilitator, while process oriented and able to use facilitator behavior easily, was the technical resource, leading the group through the technical aspects of the PMC system, subsistence to commercial agriculture transition, the technical terms and concepts, and commodity characteristics, etc.

The appendix contains additional visuals, bibliography and supporting material. The visuals can be reproduced or drawn simply on newsprint for use with the group as needed.

FACILITATOR CHECK SHEET

☐ Availability of wholesale market near training site.

☐ Availability of retail markets and agricultural areas near training site.

☐ Transportation for volunteers to wholesale market on second day.

☐ Support available for volunteers during field experience, travel, per diem or whatever is needed for local area.

☐ Hours of daily sessions cleared with local Peace Corps office (recommended - 6 hours a day).

☐ Easel and newsprint, chalkboard if possible, available at training site.

☐ Markers; stapler; chalk; paper for airplane exercise (I, E); wheats, play money for simulation (IV); all available.

☐ Up-to-date vitae information on facilitators in handout form to be included in packet.

☐ Handouts #1 through #24 duplicated and assembled.

☐ Reference or handbooks selected and available.

☐ Materials in appendix duplicated as needed.

☐ Notepaper, pencils for workshop participants available as needed.

SUGGESTED TIMETABLE

Day 1	I	Needs Assessment
Day 2	II	Market Familiarization
Day 3	III	Basic Terms and Concepts
	IV	Marketing in Action
Day 4	V	A. From Subsistence Agriculture to Commercial Agriculture--a System Evolves
		B. What is a PMC System?
		C. How Can the PMC System Concept be Used as an Analytical Approach?
Day 5	V	D. Refining Your Plan for Information Collection
	VI	A-C Characteristics of Commodity Systems
Day 6	VI	D Collecting Information on Local Commodity Marketing Systems
Day 8	VI	D Collecting Information (continued)
Day 9		Teams work on reports
	VII	Local Commodity Marketing Systems
		A. Description of Local Commodity Marketing Systems
		B. Ebb and Flow Due to Seasonality
		C. Non-Profit Motivated Behavior
Day 10		Continue VII
	VIII	Simulating a Market System
	IX	Identification of Alternatives in Previously Identified Marketing Situations (I, G)
Day 11		Continue IX
	X	Role of PCV in Agricultural Marketing
		A. Useful Processes for Planned Change
		B. Signs of Opportunity and their Location within the System
		C. Planning for Return to Site
Day 12	XI	Sharing Resources, Plans for Action A, B
		Evaluation

EXAMINING BASIC AGRICULTURAL MARKETING PRINCIPLES-- A TRAINING MODEL

I. ASSESSMENT OF THE GROUP NEEDS

A. Introduction to the module

Objectives:	The participant will be able to indicate, when asked, that the model can be generalized to examine local conditions.
Techniques:	Show course materials.
Materials needed:	Course material (handbook), visual of simplified experiential learning model.

(As facilitator, you might open the workshop by saying something like this:)

Good morning. My name is.......... and this is .... We will be working with you during the next two weeks. You have some information in your packet about us which you may want to read later.

(Here you may want to indicate roles each facilitator will take in leading the workshop. Early in the workshop you will need to talk with the group about hours, arrangements for breaks, resources available, meals, other assorted arrangements to help them feel comfortable with what's happening. This may be a good time for these details.)

Welcome to what we would like to call an active experience in examining basic agricultural marketing principles and applying them to your own work.

This is a training model. By that, we mean a training session designed to enable Peace Corps volunteers, no matter where they are assigned, to create a greater awareness and effective understanding of basic marketing concepts. This learning experience is designed to enable you to participate more effectively in developing a better flow of products from farm to consumer, given local conditions.

The term "marketing" may not really turn you on, yet, but we feel there is no more fascinating way to look at a country than to examine its marketing of agricultural commodities. We hope you'll agree.

Now, obviously, such a model cannot include a wealth of information about local conditions. A traditional system of lectures, readings, and examinations is not feasible, since conditions and markets vary so much from country to country and even within countries. So we will become country specific by involving you in an active examination of local conditions. This kind of active involvement does not lend itself to regular classroom hours, either. While we will go from about __________ to _________, with _________ at noon (actual schedule worked out in country). There will be some exceptions, such as field trips, or when you, as a group want to go longer.

There will also be some project activities after class.

The model's greatest resource is going to be you. Only through active involvement during the next two weeks will you be able to take back some insights and skills that you can use in your own area. Active involvement will usually take the form of experiential learning. Let me use this diagram to explain experiential learning.

(Visual #1--experiential learning in appendix. Explain each segment of the visual in sequence to explain how the group will be involved in their own learning.)

This model is also a module. That means that the course is built around concepts, with specific objectives for what you should know or be able to do after being exposed to each concept. Techniques are suggested for examining each concept, but we need to stay flexible enough to meet the needs of the group.

You will also have an instrument that will provide you with a means of setting some learning goals and wrestling with your own personal insights as we go through the two weeks.

B. Getting acquainted

Objectives:	Participants will acquire a general feeling for each other's expectations and learning objectives for the course, hear names and some background information, and learn more about each other's present assignment.
Techniques:	Interview and introduce each other.
Materials needed:	Numbered cards for writing objectives and introductory information.

(Suggested remarks:)

I think we'll find that the two weeks will pass very fast, and we hope it can be informal, with a climate of trust where we can question, and argue, and wrestle with ideas.

As facilitators of the module, we encourage this. We'll talk more about the facilitator role later, but we need to get acquainted with you now, and we all need to learn more about each other. We have some cards we would like to use to help do that. Who is the professional card shuffler in the group?

(After the cards are shuffled, hand cards around, including facilitators if you wish, so that each person gets one. Explain use of cards. Ask each person to write their name on the card.)

We want you to write as specifically as you can, at this stage, what one thing you hope to gain from this experience. What is the most important thing to you to be able to do with the information obtained?

(Give group time to think, and to write their objectives.)

Now each card has a number on it. We would like you to find the person with the card numbered the next highest number to yours. In other words, number 1 finds number 2, number 2 finds number 3, etc. Since there are ___ of us, number ____ will need to find number 1, so that everyone has someone to introduce them.

When you find the person with the next higher number, interview him or her, getting enough information to introduce that person to the group. Please include in that introduction the learning objective that person has for the course, as well as any other information you think may interest the group.

Now remember, you will be talking to two people, the one you will introduce, and the one who will introduce you.

(Allow the group time to work together and interview each other, then select a number and start the introduction.

You can collect the cards after the exercise for those objectives specific enough to be useful. Most may be very general at this stage. Depending upon the size of the group, the introductions may take from 20 to 45 minutes. Move as quickly as possible, but give time for the humor and get-acquainted atmosphere that must occur as a constructive part of the course climate.)

(You might say something like this:)

All right, thank you. Many times it is more difficult to introduce yourself than to introduce someone else. This exercise was designed to do several things. First it was a way for us to begin talking and working together. Second it was a way to begin articulating, first on your cards, then to each other, the objectives you have for your own learning and action. Third, it illustrates the central characteristic of the facilitator role, the importance of sharing information.

This is one of our first steps in this workshop to modeling facilitator skills. If you'll hand me your cards, I want to read them again myself, and we'll do more goal setting later in the course.

C. Collection of resource data from the participants

Objectives:	The participant will have provided the facilitator with enough background information to enable the facilitator to identify resources within the group.
Techniques:	Data and knowledge assessment sheet.

Materials needed: Data collection form. (handout #1)

(You might say something like this:)

It was obvious during our introduction that there is a great deal of knowledge, experience and skill among the members of this group. To facilitate sharing these resources more efficiently, we need to collect a little more data from you in a somewhat more formal manner. In order to identify resources we have in the group more specifically, would you complete this data sheet as accurately as possible? Please hand me your cards at this time.

(While the participants are completing handout #1 "More About You As A Resource", record the groups objectives that are specific enough on sheets of newsprint. Do this inconspicuously, or in another room where it will not disturb the participants as they complete the resource data collection form. When they are finished, tape the sheets where the group can see them.)

D. Objectives and outline of the module

Objectives:	Participants will be able to iadentify module objectives and compare them to their own objectives.
Techniques:	Handout, discussion of objectives and course outline.
Materials needed:	Written objectives for the course and outline to hand out to the group.

(You might say something like this:)

There are some overall objectives for the workshop that we have developed and would like to share with you. We'd like to compare the objectives written into the module and your objectives to see how they mesh. Where they don't we need to be conscious of reaching your objectives throughout the course.

(In reviewing the workshop objectives--handout #2--with the group, you might ask a member of the group to read the first objective, while you stand beside the objectives the group has given you and assist the group in determining if theirs are included in the workshop objectives. Where it is obvious that there are discrepancies or special objectives, you will need to integrate them into the course or inform the group why it will not be possible to do so.

After the objectives have been covered, one by one, go through the course outline, handout #3, and indicate the concepts to be covered in each section. Give the group time to ask questions as needed.)

E. Role of the facilitator

Objectives:	The participants will be able to describe the role of a facilitator as one which puts the learner in touch with resources, encourages interaction of the learner with the information, and can serve as expert on process, rather than necessarily giving all the answers on marketing.
Techniques:	Involvement in a project, where materials are provided, and resources are provided both from outside and from within the group.
Materials needed:	A supply of 8½ X 11 paper, handout #4.

(Suggested remarks)

Earlier I said that this was not to be a traditional learning model. We will not drill a hole in your head and pour knowledge in. This model relies heavily upon experiential learning, where content is generated actively with group participation, and then the group can look back at the activity and the content, draw useful insights from this analysis, and then apply it to their particular situation.

(Visual #1 if useful)

Using the facilitator approach does not mean we are going to wander through the two weeks. We have some definite goals and some definite content in mind. The way we interact with the content may be a little different than what you are used to.

I can best illustrate the facilitator role by involving you in an exercise. What are the ways I can teach you to make a paper airplane? One way for you to learn to make a paper airplane would be for me to tell you how. (If the facilitator wishes, another exercise could be substituted for the paper airplane.) How else? Demonstrate, show a visual. I do have some paper airplanes already constructed.

But I suspect that we might all get more learning out of it if we learned to make a paper airplane in a different way. First of all I have some paper.....

(This exercise needs to be very freewheeling, with the leader asking the group to work along with him/her, and asking them if they know how to get started. Question the group along the way, as they begin to fold, or as you show them the initial steps, about how you might do it, how it can be done better, what happens if we want to change the design, or get better aerodynamics. Build the airplane together, trying to get everyone involved in making an airplane, and everyone involved in sharing knowledge about how to make paper airplanes.

After everyone has completed an airplane, the proof of how well they are done is to see if they'll fly. After everyone has had a chance to fly their airplane, bring the group back to the subject at hand--facilitation, with some of the following questions:)

What was the difference between me telling you how and the way we did it?

Where did we find our resources?

Where did we find our content?

In what ways did we massage the content or modify it?

What role did I play as facilitator? What did I do?

How did I act?

What kinds of comments or suggestions did I make?

(The idea here is to demonstrate the characteristics of the facilitator, and the facilitator approach. Make the point that this exercise illustrates many of the roles of the facilitator--experimentation, cooperation, task orientation, helpfulness, allowing growth in knowledge of resources available, interaction with the information, fun if possible.)

F. Learning contract

Objectives:	Participants will be aware that there is included for their use in the course, a worksheet that they can use to guide their own learning and that using the worksheet is related to developing facilitator skills, or specific knowledge of marketing.
Techniques:	Learning contract.
Materials needed:	Learning contract worksheet, (handout #5) and Ideas for each major topic (handout #6).

(You might want to say something like this:)

Obviously, in the two weeks we'll spend in this workshop, each one of you will not necessarily become an expert on marketing. For this matter, each person can be expected to react differently to the same experience and you will not all internalize the marketing principles to which you will be exposed in exactly the same way or master it to the same extent.

You have come from different past experiences, your present assignments are different, and you may apply the principles you learn here in quite different ways. However, we as facilitators can assist you in developing certain skills. These are process skills. That is enough knowledge of the facilitation process to allow you to use basic marketing principles, apply them in your work, and help the people that you work use them. To do this you will need to identify the skills and knowledge you need to develop, set some goals for your own learning, and find resources to help you meet those goals.

Handout #5 is designed to help you decide what you want to learn during the course, how you can continue to learn after the course, and how the workshop facilitators can help you learn and plan to use the knowledge gained. Handout #6 is designed to assist you in recording key ideas as they occur to you.

(Give the group a chance to look at the handouts now. Suggest that they work on them as soon as possible on their own and discuss their learning goals with the facilitators by the end of the fourth day. When the group members share their goals with you later, you must be supportive and continue to play the facilitator role. Encourage them to practice facilitator skills in the workshop, and identify resources that can help them.)

G. Identifying situations in marketing

Objectives: Participants will be able to begin a dialogue within the broad topic of marketing, which will lay the groundwork for further thought and investigation, and follow-up at a later time.

Techniques: Forum and group discussion.

Materials needed: None.

Since the participants will have been in the field for a time, they may have already discovered what they perceive to be problems or shortcomings in agricultural marketing. At this stage, these problems may or may not be well defined in their own minds. This course should clarify their perspective and enable them to discover potential opportunities. It should also help them plan how they might function more effectively upon their return to the field.

This time can be spent in sharing some of the volunteers' initial experiences with local marketing institutions.

As a facilitator, encourage everyone to share in the discussion. During this time, you won't be trying to define all of the facets of a problem, just simply allow individuals to introduce it with some discussion. You may want to ask the participants how they think the participants in the system (farmers, buyers, processors, etc.) perceive the problem/opportunity that was identified.

Point out to the group that during the course they may find that this is an area they will want to work on, or their perspective may change somewhat as they dig deeper into the situation. Assure them, as you move from individual to individual, they will have time to explore the issues in more depth.

Note: Handouts #7 and #8 are included at the end of this unit, to be handed out before visiting the market, preferably the day before.

Handout #1

More On You As A Training Resource

Note: We would like to know more about you and what you are bringing with you to this course. By having a better understanding of your background and interests, we can adjust the course to your specific need.

Name: ____

Site: ______________________________ Time in country _______ months

Agency Assignment: ____

Principal Responsibilities Include: ______________________________________

____

____

General Background:

A. Education

Degree	Year	School	Major

B. Experience (briefly describe farm and/or business realted activities)

Identify a marketing situation you are familiar with at your site and discuss it briefly with attention to opportunities presented by current bottlenecks. Describe such opportunities and how they might be realized. How might the situation and your proposed solution be viewed by such market participants as farmers, processers, consumers, and others? (Continue on back of page as necessary.)

COURSE OBJECTIVES

Objectives: By the end of the course, you will be able to:

1. Discuss the basic principles of agricultural marketing and define them according to local conditions.
2. Identify and describe the transition from farmer's field to consumer's table for several locally important commodities.
3. Identify the participants involved in a commodity production-marketing-consumption (PMC) system and be able to evaluate the degree of interaction.
4. Examine local commodity PMC systems for signs of constraints and be able to define such problems or bottlenecks as opportunities for local farmers and businessmen.
5. Devise strategies for improving the functioning of a particular commodity system using the PMC matrix to identify potential entry points.
6. Effect a change in attitudes among farmers and other actors, i.e., that they are "participants in" and not "victims of" the system.

COURSE OUTLINE

I. Needs Assessment

- A. Introduction
- B. Getting acquainted
- C. Collection of resource data
- D. Objectives and outline of the module
- E. Role of the facilitator
- F. Learning guides
- G. Identifying situations in marketing

II. Market Familiarization

- A. Visit to a wholesale market
- B. Determining commodities for investigation
- C. Identifying market participants

III. Basic Terms and Concepts

- A. Marketing in general
- B. Agricultural dimension to marketing

IV. Marketing in Action

- A. Simulation of a market system

V. The Production-Marketing-Consumption (P-M-C) System Approach to Agricultural Commodities

- A. From Subsistence agriculture to commerical agriculture--a system evolves
- B. What is a production-marketing-consumption (P-M-C) system?
- C. How can the P-M-C system concept be used as an analytical approach?
- D. Fine tuning your information collection plan

VI. Characteristics of Commodity Systems

- A. Basic characteristics of crop/livestock commodities
- B. Basic characteristics common to commodities that influence the nature of the P-M-C system

C. Behavior implied for system participants for given commodity groups

D. Collecting information on local commodity marketing systems

VII. Behavior of Market Participants

A. Description of local commodity marketing systems

B. Ebb and flow due to seasonality

C. Non-profit motivated behavior

VIII. Simulating a Marketing System

IX. Identification of Alternatives in Previously Identified Marketing Situations I-G

X. Role of a Peace Corps Volunteer in Agricultural Marketing

A. Signs of opportunity and location within the system

B. Step-by-step plan for back-on-site action

XI. Sharing Resources, Plans for Action

A. Reporting on action planned

B. Evaluation of workshop

THE "FACILITATOR" APPROACH IN TEACHING

Have you ever had a teacher use the bulk of the class period writing on the chalkboard with his or her back turned to you? Or do you remember long periods when you were expected to listen, with no opportunity to interact with the teacher or with each other?

Perhaps these are extremes and seldom happen in education designed for "adults." However, the instances where the teacher-leader interacts with the subject matter are all too frequent.

The result of such teaching may be the learner leaving what should have been a learning experience with no real improvement in his ability to solve problems or discover opportunities; or no real comprehension of how complex segments interrelate to form a complete and functioning system.

An effective educator once said, "It is not possible to teach anyone anything. It is only possible to arrange a situation where they can learn." You may or may not agree with this statement, depending upon your definition of "teach." But your arrangement of a situation conducive to learning has a good deal to do with the actual learning and change in knowledge, attitudes, or skill that takes place.

The term "teaching" tends to force the teacher-leader to assume the burden of the responsibility for learning, instead of placing the responsibility for learning on the learner, where it belongs.

Many times the teacher-leader is placed in the role of an "expert" who has "the answers." We may have "answers," but they may not always correspond to the "questions" or the real needs of the client.

The "expert" role can be defined in different ways. It doesn't always mean "telling" all you know. An "expert" can also be a facilitator, facilitating growth in the learner and increasing ability to discover opportunities for creativity.

What is a facilitator?

A facilitator is a helper, more concerned with bringing about learning in the group than in controlling the group. He is aware of the different roles that the facilitator can play in the group, not just by being an expert on subject matter, but through acting as a questioner, clarifier, designer, etc., of the form in which learners may interact with the information. Usually the facilitator plays a non-judgmental role, allowing the group to present ideas, analyze, compare alternatives, assisted by the facilitator as a question asker, situation poser, clarifier, and designer of the learning situation.

The facilitator role requires strength on the part of the leader to allow ideas, to refrain from making direct judgments, to guide and assist the learning, without taking the group too far afield, or permitting frustration to mount too high.

Often a definition of exactly what the learner is expected to gain--the change to be brought about in attitude, knowledge, or skills, and specific concepts to be mastered, helps the facilitator to guide active exploration of those concepts.

As professional helpers, we are all actively involved with bringing about learning (change, new ways of coping or behaving) and growth in our clientele. This is true whether our clients are defined as individuals, groups, communities, or people in a larger geographic area.

There are some principles or common elements generally accepted as desirable in bringing about learning or change. They are:

The principle of experimentation: That is the expression of a problem out of a situation of difficulty, with opportunity for the learner to experiment with different alternatives and then applying the best alternative to the situation (particularly his own situation).

The principle of cooperation: If everyone in the group or client system has a part in testing and choosing alternatives, chances are that choices will be more relevant to the client and success is apt to be reinforced.

Problem-solving by the client should be task oriented. Energy spent in maintaining prestige, or power, or ego is energy not directed toward constructive learning tasks.

Learning should be helpful to the client. That is, learning must be consistent with the growth needs of an individual and not result in repression or the client's depression. (It might even become fun for the client—if the facilitator allows it.)

Learning should allow a growth in knowledge of resources available for further development. It can assist in forming communication likages that have not previously existed. Perhaps members of the group or client system will also have increased skill in communicating with one another.

The facilitator role can be fun; it can be challenging; it will take a little more time to allow people to interact with the subject matter, but it can pay off in increased learning for the people with whom you work.

A LEARNING CONTRACT

This is a contract that I make with myself

Learning Objectives	Date to be accomplished	Learning Strategies (How are you going to go about it?)	Evidence of accomplishment of objectives

Handout #5

You can use this worksheet to record ideas or insights that occur to you during the course.

What ideas were triggered in your mind by taking part in this session?

Idea ______________________________

____

____

How might you use it? ______________________________

____

____

Idea ______________________________

____

____

How might you use it? ______________________________

____

____

Idea ______________________________

____

____

How might you use it? ______________________________

____

____

Please observe the wholesale market, and collect information to answer the following questions in general terms:

Where are products coming from?

Where are they going?

Do prices vary for the same commodity?

If so, how much? What are some possible reasons for the variation?

Do grades and standards exist?

If so, for what commodities?

Are products sold by weight or volume?

MARKET FAMILIARIZATION

The Agricultural Marketing System refers to the total system within which agricultural inputs and products are exchanged, processed, and priced. It encompasses the following purposes:

1. Movement of agricultural inputs to the farm.
2. Helps allocate limited resources to those enterprises that give maximum returns.
3. Movement of agricultural products from farm to consumers, both intermediate and final.
4. Provides an incentive for the preservation of agricultural products over a period of time between harvest and consumption.
5. Delivery of such commodities to the place desired, in the quantity desired, and at the time desired.
6. Processing raw agricultural products into food and fiber in the form and of the quality demanded by the consumer.
7. Conveyance of input and product information to producers and consumers.
8. Allocation of inputs and products by balancing supply and demand through pricing.

The marketing system serves the farmer well when he receives his optimum share of the final consumer prices of the products that are produced on his farm. This accomplished when his products are handled, transported, and processed efficiently (economically) when supply and demand are equated on fair terms. Farmers, extension agents, bankers, consumers, etc., need to be concerned both with the mechanics and cost of moving farm inputs and products to and from the farm to the ultimate consumer. Also, one needs to be concerned with the means and cost of securing the best price for those products.

The most common approach used in describing and understanding a marketing system is to describe the various stages and functions contained within a particular food system.

A marketing stage corresponds to the period during which a particular marketing person or institution maintains possession of the food commodity being investigated for the purpose of carrying out special function. A given marketing stage begins when one person(s) or institution acquires legal title or control of the product and ends when control is passed on to another. This is clearly defined when ownership signifies control; and when any two consecutive market transactions circumscribes a marketing stage. However, sometimes one particular marketing person(s) or institution will retain ownership of a commodity and pass it on to another person(s) or institution to perform a particular marketing function or series of functions on a contractual basis. In this case, marketing stages may be defined by the points at which functions change. More will be discussed about marketing functions later.

Example: Marketing Transactions:

From Philippines: Vegetables are being sold by the farmer through the local village market to the trucker-middlemen. This in turn is transported to Manila and either sold directly to a larger retailer or to a wholesaler. The wholesaler in turn sells to small retailers within the city. Each of the above changes in product possession describes a separate marketing stage.

Example: One "possessor" but several stages:

From Colombia, S.A.: "In a small town in Colombia, fat steers are purchased in small lots on farms by local middlemen. These middlemen then drive the cattle to the local town and establish a contract with a local retailer of meat to purchase the animal on a live weight basis. He then contracts the slaughter through municipal facilities and delivers the fresh carcass to the retailer, but maintains possession of the carcass until it has been retailed". While one marketer maintains ownership of the product through the entire marketing system, the movement of the product through the entire marketing system can be divided into three distinct marketing stages--local assembly, slaughter, and retail sale.

If you look at the total agricultural marketing system, the movement of farm products to the consumer generally tends to flow through five well defined stages (Table 1):

TABLE 1

FARMER

1. Local Assembly
2. Intermediate Assembly
3. Processing
4. Wholesale Distribution
5. Retail Sales

CONSUMER

Not all food commodities will move through the same number of stages. One or more of these definitive marketing stages may be skipped or not be required for a given commodity.

Not all farm production moves through the marketing system. A portion of the crop will commonly be consumed on the farm by the family or cycled through another enterprise such as animal systems. In the case of food crops, farm family consumption accounts for a sizable portion of total consumption.

Table 2 illustrates various types of marketing stages for selected commodities. It would be misleading if it implied that all producers and marketers of the six commodities illustrated move their products through the same series of marketing stages. Farmers who live close to a good road or town might skip the local buyer--assembler and sell directly to the processor, wholesaler, retailer, or even the consumer. If he does skip the various stages which perform specific functions, he then takes on the responsibility to do the sorting, grading, processing, transporting, etc.

TABLE 2

Marketing Flows for Specific Commodities

		Stages Through Which the Product Passes				
Commodity	Product Form	Local	Inter-mediate	Pro-cessor	Whole-saler	Retail
1. Corn	Chicken Feed	x	o*	x ←	o	→ x
2. Beans	Dry-edible	x	x	o	x	x
3. Rice	Milled Rice	x	x ├─	─┤ x	x	x
4. Beef	Meat	o	x ←	x ------	x -----	→ x
5. a) Milk	Fluid	x ←	o	→ x ←	o	→ x
b) Milk	Country Cheese	o	x	o	x	x
6. Tobacco	Export Bales	x	x	x ├─	─┤ x	o

*o = stage skipped

A line ├────┤ = same individual or ↔
institution controls more
than one stage.

-------- = functions contracted

Explanations

1. Processor controls a chain of feed stores.
2. Beans need no processing.
3. Rice miller buys directly from local trucker-buyers and local commerciantes.
4. Wholesaler-retailer buys his own animals at a regional market, contracts with a municipal matadero for their slaughter, and has the meat retailed on a commission basis.
5. a) Processor picks up fluid milk at the farm gate and delivers bottled milk to consumer's door.
   b) Farmers haul homemade cheese into regional buying centers; no further processing required.
6. Exporter sorts, grades, and packs. Export stage is equivalent to wholesale stage.

DESCRIPTION OF INDIVIDUAL STAGES

On-the-Farm Marketing Stage

Most marketing models begin at the point of sale by the farmer. Here, we assume that there is a stage prior to local sale which we call on-the-farm, and which starts when the harvest is completed and ends at the point of sale by the farmer. Functions such as conditioning, processing, transport, and storage which are performed by a farmer prior to the sale of his crop will be considered as marketing functions rather than production functions. This is the stage at which the small farmer has the greatest control over the marketing process and the greatest opportunity to reduce marketing costs or to increase his share of the marketing margin.

The Local (Assembly) Stage

Farmers, particularly small farmers, usually sell their crop at the farm gate or at roadside to a trucker-buyer, or in the village to a local merchant-buyer. The local marketing stage is the point in time and space where farm products first change hands. The market functions normally associated with this stage are assembly and transport, but depending upon the commodity being marketed, grading, and conditioning are frequently performed at this stage. Storage is an option here as it is at every stage.

Market transactions at the local stage tend to be influenced more by custom and by personal relations between buyer and seller than they are by standards. Farmers prefer to sell their crops locally. Usually small farmers are reluctant to move their products beyond the radius of the local market even when the farmer knows that price minus transport costs is higher at a more distant market.

The local marketing stage is the point where farmers most frequently attempt to intervene collectively in the marketing system.

The Intermediate Stage (or Stages)

At the intermediate stage of marketing, larger volumes of commodities are assembled than can be purchased locally. The larger volume of products moving through the intermediate stages permits economies of scale to be achieved in market functions such as transport, storage, conditioning, financing, and later processing. There may be more than one intermediate stage, depending upon the complexity of the marketing process. Intermediate stage market transactions tend to be governed by standardized procedures.

The Processing Stage

For commodities such as rice, wheat, feed grains, oilseeds, fresh meat, fresh milk products, etc., there is a marketing stage involving processes such as milling, slaughter, oil separation, pasteurizing, bottling, etc., that marks the transformation of a farm product into a consumible food. This is the processing stage, and it is the point in the marketing sequence where product transformation becomes irreversible. Functions in addition to processing which are commonly performed at the processing stage are grading, conditioning, and storage.

The Wholesale (Distribution) and Retail (Sales) Stages

The greatest concentration of volume of farm products usually occurs at the above (processing) stage. Farm products tend to move through an hourglass shaped network, in ever-increasing concentration of flow to the processor and then in ever-decreasing concentration of flow to the ultimate consumer. Buying and assembly on the input side of product transformation, and distribution and selling on the output side of product transformation, are analagous functions.

The wholesale distribution and retail sales stages of marketing are not subjected to analysis in the system we outline in the working guidelines and analytical key. However, the field worker should watch wholesale prices or wholesale price indices carefully because they can be valuable indicators of current conditions of supply and demand.

II. MARKET FAMILIARIZATION

A. Visit to a wholesale market

Objectives:	The participants will be familiar with the layout of the market place wholesale and/or retail; be able to find out in such a market where products are coming from, and where they are going; variation in prices for commodities; grades and standard information; and if products are sold by weight or volume.
Techniques:	Early morning visit to one or two market sites, depending upon accessibility.
Materials needed:	Handouts #7 and #8, transportation to market(s) for entire group, meeting place for group breakfast.

(Indicate to the group the day before that they will be visiting the market early the next morning. Distribute handouts #7 and #8 to the group, and ask them to find out that information during the visit to the market plus any other observations they can make. If the group gets up at 3:00 a.m. or thereabouts, you will probably want to have a shorter workshop session that day. Pilot workshops indicate it would be better to keep the group together after the experience, go ahead with the workshop session, and dismiss at noon or before.

You will need to make arrangements to visit the market, find out the best time, legitimize visit through Peace Corps office if necessary, and find out if costs are involved. Transportation will have to be arranged.

After breakfast, follow up the visit by encouraging the group to discuss their observations and information gained. Indicate to them that this experience is setting the stage for more in-depth exploration of marketing systems.)

B. Determining commodities for investigation

Objectives:	Participants will be able to identify institutions and occupations involved in at least one commodity system and make preliminary arrangements for collecting information during the field exercise.
Techniques:	Formation of teams, selection of commodities, group demonstration of identifying market participants.
Materials needed:	Handout #9, newsprint, markers.

(In order for the participants to make adequate arrangements to reach people they need to talk to during the field experience, you should consider laying the groundwork for the field experience at this time. Pilots of the module have found that it is particularly difficult to make appointments with governmental agencies or some larger companies on the weekend. If you can plan the experience to include one market day and one week day the participants should be able to arrange appointments and visit the markets during the experience if necessary.

In addition, some of the larger companies requested a letter from someone in their agency or organization or someone outside before they would release information.

Beginning early to lay the groundwork will allow time for proper arrangements to be made.

Ask the group to identify commodities of importance in the area. After arriving at a list of commodities, with assistance of the group, narrow the list to commodities accessible to them near the location of the training.

You will be able to work with a maximum of six teams, and five is probably better.

You can assist the participants in selecting the commodities they wish to examine. You will need to reach a consensus within the group about which are the most important commodity systems to be included in this exercise.

After you have facilitated group discussion and consensus on this and have a list on newsprint, put together three-to-five-person teams based on who wants to examine which system. If more than five people want to examine one commodity system, the members of the group should decide who will pursue information on which system.

Hand out the PMC system matrix, handout #9, and without going into depth about the handout at this stage, simply tell them that a marketing system consists of production, marketing, and consumption sectors, and to analyze the total system requires analysis in each of these sectors.

Before breaking into the teams to identify local participants for their commodity, use the next set of exercises to assist the group in thinking about institutions and occupations involved in the marketing process.)

C. Identifying market participants

Objectives:	Participants will be able to tentatively identify the institutional participants for at least 2 commodity systems.
Techniques:	Brainstorming by total group, aided by facilitator.

Materials needed: Newsprint, easel, and markers.

(Your purpose in this exercise is to assist the participants in thinking through the institutions and occupations involved in the marketing process. Select a major crop or commodity and ask the group to identify what happens to the crop or commodity from production to consumption. Assist the group in identifying institutions and occupations involved with the process.

Write what the group identifies on the newsprint or chalkboard with no attempt to judge or rank at this stage. After the group has listed all of the ideas they can think of, assist the group in sorting the ideas, judging if indeed the list is accurate, and sequencing the order in which each institution or occupation is involved in the process and the function of each.

Indicate to the group that while you will be doing more preliminary work with the PMC matrix and deciding exactly what information to collect for each commodity, at this time they need to identify some market participants for their commodity that they will want to talk to and set up some appointments at this time. You can determine later what specific questions you want answered, but in general they will be interested in the flow of goods within the system and relationships between the parts of the system. Indicate that you have discussed market system participants at this stage in order for them to make some necessary preparations for the field exercise, but that you need to come back to some basic terms used in marketing and interact with them before examining marketing systems further.)

Handout #9

The PMC System Decision Matrix

	Component Description	Physically possible	Economically feasible	Institutionally permissable			
P 1	Land & water resources					PRODUCTION SUBSYSTEM	
P 2	Production financing						
P 3	Pest control						
P 4	Seed availability						
P 5	Fertilizer needs						
P 6	Input procurement						
P 7	Farmers' risk taking						
P 8	Farm machinery needs						
P 9	Farm energy requirements						
P10	Input information						
P11	Government services & regulations						
P12	Ag research programs						
P13	Ag information programs						
P14	Crop organizations						
P15	Farm labor needs						
P16	Market information for farmers						
P17							
P18							
P19							
P20							

Ma 1 Procurement resources					MARKETING SUBSYSTEM procurement
Ma 2 Dependable supply					
Ma 3 Procurement financing					
Ma 4 Government service & regul.					
Ma 5 Market intelligence					
Ma 6 Transport & storage					
Ma 7 ______________________					
Ma 8 ______________________					
Ma 9 ______________________					
Ma10 ______________________					
	▨	▨	▨	▨	
Mb 1 Processing resources					processing
Mb 2 Processing equipment					
Mb 3 Commodity institutions					
Mb 4 Processing energy					
Mb 5 Processing research					
Mb 6 Processing info programs					
Mb 7 Processing by-products					
Mb 8 Managerial ability					
Mb 9 ______________________					
Mb10 ______________________					
Mb11 ______________________					
Mb12 ______________________					

Mc 1 Distribution resources					MARKETING SUBSYSTEM distribution
Mc 2 Distribution financing					
Mc 3 Product market info					
Mc 4 Product transportation					
Mc 5 Market research & development					
Mc 6 Government services & regul.					
Mc 7 ______________________					
Mc 8 ______________________					
Mc 9 ______________________					
Mc10 ______________________					
	▨	▨	▨	▨	
C 1 Market penetration					CONSUMPTION SUBSYSTEM
C 2 Market size					
C 3 Consumer awareness					
C 4 Product versatility					
C 5 ______________________					
C 6 ______________________					
C 7 ______________________					
C 8 ______________________					

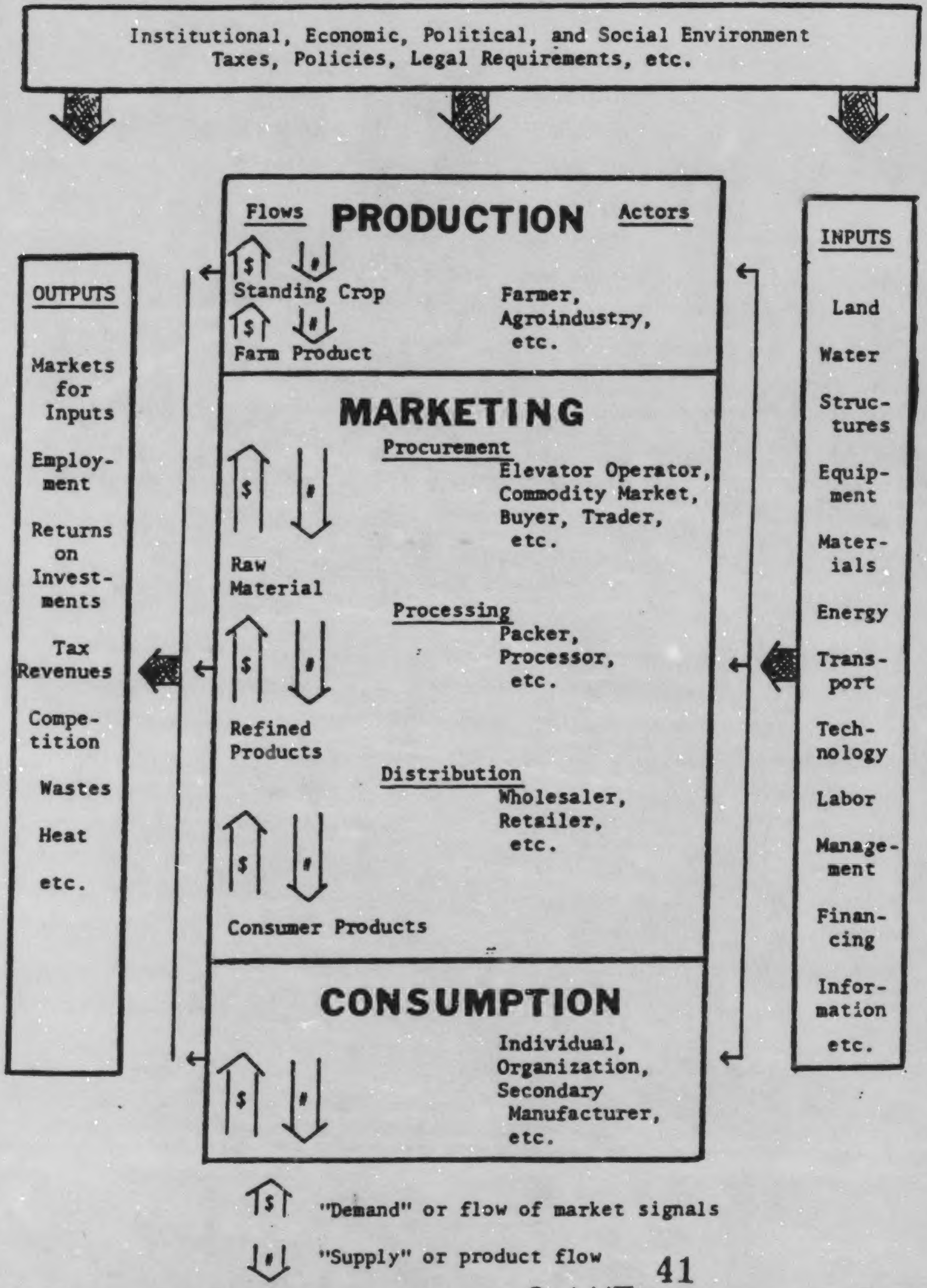
MARKETING SYSTEMS: THE PMC APPROACH

In many parts of the world and to a lesser extent in the United States, one finds the term "marketing" can be interpreted in various ways. At one extreme, there is a tendency to equate marketing to all the shortcomings of traditional middlemen, or marketing is seen as providing marketing improvements in the form of appropriate infusion of storage and processing facilities in rural areas.

It is convenient here to regard the Marketing System as a primary mechanism for coordinating the transformation of production inputs through a production system and through distribution and processing channels to the final consumer. Marketing, thus, includes the exchange activities associated with the transfer of property rights of commodities, the physical purchasing and allocation of resources, the handling of products, disseminating information to participants, and the many institutional arrangements for facilitating these activities. Many of the decisions involve production planning in relation to market opportunities. We can then view a Marketing System from a systems approach as "the set of activities and processes coordinating various stages in the production-distribution-consumption channels for a food system". In short order then, the marketing system is a process for signalling those engaged in the production, distribution, and consumption of agricultural activities: it is a communication system in which the different market roles come together to change ownership of the commodity.

It is useful to conceptualize marketing activities within a Production-Marketing-Consumption (PMC) System. This conceptualization of the marketing system guides the Peace Corps Volunteer or researcher into seeing how each activity is associated with others and how actions taken to affect one activity may affect some that have gone on before or are likely to follow afterwards (see figure). The concept further suggests that although functions take place internally, there may be forces external to the system which influence its functioning--thus, the possibilities for identifying points of leverage which may be useful for moving or reforming the system. It is

General PMC System


Institutional, Economic, Political, and Social Environment
Taxes, Policies, Legal Requirements, etc.
OUTPUTS
Markets for Inputs
Employment
Returns on Investments
Tax Revenues
Competition
Wastes
Heat
etc.
Flows
PRODUCTION
Actors
$
#
Standing Crop
Farm Product
Farmer, Agroindustry, etc.
MARKETING
Procurement
Elevator Operator, Commodity Market, Buyer, Trader, etc.
Raw Material
Processing
Packer, Processor, etc.
Refined Products
Distribution
Wholesaler, Retailer, etc.
Consumer Products
CONSUMPTION
Individual, Organization, Secondary Manufacturer, etc.
INPUTS
Land
Water
Structures
Equipment
Materials
Energy
Transport
Technology
Labor
Management
Financing
Information
etc.
"Demand" or flow of market signals
"Supply" or product flow

concerned with the coordination of the sociocultural-economic and agronomic activities as a whole system.[1] The distribution of farm inputs, farm production, food distribution, processing, retailing, supporting services and consumption behavior, etc., are viewed as a system because they are interdependent. For example, small increases or changes in one part of the PMC system may greatly affect or change the performance and development for the system as a whole. However, failure at any functional level may cause stagnation in the entire system.

The PMC system is a problem-solving methodology that progresses from a tentatively identified set of needs resulting in an operating system which is acceptable given trade-offs among needs and resource limitations. Such an approach is very flexible in that it utilizes a wide range of information-gathering and analytical methods, both qualitative and quantitative. It also represents a prefeasibility assessment of the Physical, Economic, and Institutional aspects of a food system.

ANATOMY OF THE PMC SYSTEM MATRIX

The PMC system ties together the individuals and institutions which plant, nurture, harvest, process and distribute, and consume the commodity. To gather information and evaluate the System's stage of development, as well as chart its progress, a general-systems framework was designed. It identifies three subsystems (farming subsystem, marketing subsystem, and consumption subsystem) and further divides the marketing subsystem into procurement, processing, and distribution phases. The consumption subsystem is divided into four components -- market penetration, market size, consumer awareness, and product versatility -- with each one referring to each type of consumer (farmer, household, institution, etc.), consuming the final product.

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[1] Coordination, a key concept in the PMC system, is concerned with those arrangements, agreements, contracts, information flows, payments, and physical product movement necessary for the harmonious functioning of the exchange system.

A decision matrix was formed by recognizing the inputs and outputs used in each subsystem as well as the socioeconomic and political environment within which a PMC system operates. This system could be at a regional, state, district, village, or farm family level.

Such a matrix allows the identification of constraints or potential opportunities for further development of the commodity system. It allows for a commodity system to be assessed in a preliminary manner to determine the feasibility of expanding a current commodity introducing a new crop or crop variety into an area, or the impact of elimination of a crop. The PMC system enables one to view the process in a more wholistic manner with respect to economic and social factors.

Within the PMC system 40 basic components are defined (additional space is provided to add items not mentioned). Some of the components mentioned may require refinement on your part or elimination. The 40 components identify the most crucial inputs, functions, and elements relative to the current status and/or future development of a PMC system: the matrix permits each of the system's components to be evaluated in terms of physical (including technical) possibility, economic feasibility, and institutional permissibility. Economic feasibility requires that the function be performed as profitable for the new variety or crop as for other uses to which the resource can be allocated. Other economic factors such as riskiness of the new variety or crop and management requirement need to be assured with respect to other existing crops. Institutional permissibility implies that neither legal nor sociological obstacles hinder the components' establishment. An additional column exists for cultural permissibility dimensions or any other factor that should be included. The PMC matrix can accomodate a numerical or non-numerical rating as to the degree to which the 120+ variables do or do not constrain further development of the particular food crop system being examined.

The matrix can be used to examine the physical possibilities of a particular component(s) functioning in an existing or new crop PMC system. Some of the components may already exist, such as water resources or land availability, while others might be borrowed from other PMC systems.

Borrowing from existing crop PMC systems is a major device for the establishment of a new system. Creation of new elements (or recruitment of new actors), new inputs, new input supply systems, and new linkages is much more difficult than conversion of existing facilities and institutions. Nevertheless, borrowing does have significant costs. The new crop must compete with the crop that is displaced; there is an opportunity cost for transfer of the components. In many cases, borrowing requires modifications and adjustments, possibly extensive and expensive ones. Fully as important, new crops have no performance record and risks are unknown. Entrepreneurs must assume that risks are high and demand higher estimated economic returns than for established crops to assign financing and management efforts to a new crop.

However, if the component does not exist or cannot be borrowed, then that component must be developed and appropriate institutions and services must be established to handle it. An assessment should be made on each component that must be developed regarding the difficulty, cost, and time required to do so.

If the decision matrix indicates that it is physically possible to perform the function required of the component, then the component is evaluated in terms of economic feasibility and institutional permissibility.

DRIVING FORCE OF PMC SYSTEM

Past studies on recently established crops and historical information indicate that for a PMC system to become established, effective demand for the end product is a necessary condition. Effective demand refers to the various quantities of a particular commodity which a consumer is willing and able to buy as the price of that commodity varies, with all other factors (such as taste, preference, and prices) affecting demand.

The core feature of a functioning PMC system is a flow of goods in response to economic demand for the end product that is great enough to activate all of the necessary functions of the system. Consumer demand for the end product is of crucial importance for the profitability of the system and the volume of flow. At any given volume, the price paid by consumers must produce a satisfactory economic return in all levels of the production and marketing subsystems. The price consumers are willing to pay tends to decrease with increasing volume, thus the volume of flow can increase only up to a price level that is acceptable to the production and marketing subsystems. Industrial consumers commonly require high volumes, high quality, and reliable supply.

At a given price level, profitability is controlled by costs of production and marketing. Reductions in cost that make lower consumer prices acceptable allow greater volume of flow. Thus, both reductions in cost and increases in demand permit increases in volume of flow. Increases in demand result from restriction of imports, replacement of competitive products, technological developments that call for new products, changes in consumer tastes and preferences, development of export markets, expansions of economic activity, population growth, or some combination of these. Reductions in cost may result from more efficient farm machinery, improved cultivars (with higher or more reliable yields or both, pest resistance, characteristics that facilitate harvest, etc.) improved storage and handling technology, etc. Relatively minor changes in demand or costs can lead to major changes in volume of flow. Such changes are called "key catalytic events".

UTILITY OF SYSTEMS APPROACH

A functioning PMC system essentially is the product of the decisions, actions, and reactions of many participants during the introduction and development of a crop and its products. A systems approach enables participants to anticipate needs, identify key issues, evaluate and monitor progress, and coordinate and direct their activities toward the efficient development and functioning of the aggregate PMC network.

Studies of recently introduced crops indicate that the establishment of crops can vary from being largely ad hoc, often erratic, to being well organized where actions are orchestrated in an integrated planning and decision-making structure. Obviously, the latter facilitates the flow of information, resources, and products more readily.

One note of clarification is appropriate here. Despite the interventionist orientation denoted by a "planning" structure, our intention is to create sufficient awareness among potential participants in a PMC system so that planning and the formulation of strategies, etc. evolves internally as the system develops.

The systems approach improves our understanding of PMC system components, their functions, and the key elements that condition efficient use of resources in the development process. This enables the identification of the system's current level of development. The system's participants then are able to hypothesize goals for the PMC system and formulate constraint-alleviating activities in a time-phased sequence that will facilitate decision-making by system participants.

COORDINATION AND INITIATION

The subsystems and phases of a PMC system, of necessity, are always very nearly in balance at a level of activity that corresponds to the volume of flow through the system. When the volume of flow is relatively large, an increase in capacity or activity at some level of the system will generate market signals that call forth corresponding expansion at other levels throughout the system. On the other hand, when the volume of flow is relatively small or even zero, the successful implementation of an addition to the system at any level must be coordinated with corresponding additions at all other levels. That is, a successful addition must be part of a full PMC increment that provides for flow of goods from producer to consumer.

The coordination necessary to effect a functioning new PMC increment can be achieved by dependence on market signals to recruit actors whose response can be reliably predicted and readily controlled, simplification of the system and reduction of the number of linkages between levels to the minimum necessary for flow of goods by elimination of intermediate levels and performance of the functions of one level by actors of another level, contracts or other agreements between actors of different levels, and formation of other linkages. Linkages are connections between or among levels of a PMC system that transmit information, guarantee performance, or provide vertical influence or control. Linkages include information services, interest groups, commodity organizations, contracts, and other devices.

The structure of the PMC system, as determined by the nature of the crop, the crop products, and their utilization, very largely controls how coordination can be achieved and at which level actors have the necessary discretionary power to influence and control actors at other levels as necessary to implement a new PMC increment.

The power to implement or to initiate implementation of a new PMC increment is concentrated in those levels in which the elements must be relatively large for efficient performance of the necessary functions, are specialized and not readily converted from or to other uses, require long-term commitments, require large investments, and entail high risk. Potential actors in other levels in which the elements are relatively small and relatively flexible are very largely dependent on the decisions of more powerful actors to implement a PMC increment.

A realistic implementation strategy, then, requires a prediction or postulation of the PMC system structure to identify concentrations of power to initiate implementation, intermediate PMC system levels that can be eliminated temporarily, functions that can be assumed by actors in one of the essential levels, actors whose response can be predicted and controlled readily, necessary linkages that must be made through formal agreements, etc.

For crops which require extensive, expensive, and specialized processing, processors may be the key actors for initiation of a new PMC increment. Large industrial consumers may be the key initiators for systems in which the consumer product is an industrial feedstock. Large producers or organizations or producers may be able to initiate PMC systems which require simple or no processing or for which processing can be borrowed. In many cases distribution can be borrowed; that is, an existing distribution subsystem for a number of other products can be utilized for a new product. Procurement tends to be eliminated as a separate activity in new PMC increments by direct transactions between producers and processors, distributors, or consumers.

Some of the most promising potential new crops present difficulties for crop introduction much greater than those for many established crops. The type of utilization is particularly important. Direct human use or livestock use are easier to establish than indirect use of the crop product as an industrial feedstock, supply, or ingredient for some secondary or tertiary product. Likewise, utilization of the fresh or preserved plant material is easier to establish than utilization of a more highly processed material.

The degree of commercialization is probably less important in establishment of a new crop PMC system. As indicated above, systems tend to be reduced to a minimum of transaction when they are first generated and to assume more elaborate and complex procurement and distribution subsystems as production, processing, and consumption became well established.

Other factors that determine the complexity of the PMC system to be developed and the difficulty of its establishment include: (1) time required for return on investments, (2) the degree of similarity to other crops and crop products, and (3) the scale of activity required for efficient performance of essential functions. Always assuming the essential condition of overall profitability, the simplest PMC systems to develop are for annual crops, similar to other crops in production requirements, that have fresh or easily preserved products of obvious utility (such as human food or livestock feed). The most difficult systems are for perennial crops that have unique production requirements, require extensive and expensive processing of a unique kind, and that yield refined products of value primarily as feedstock for industrial use. Potential systems for which all or most components can be borrowed are more easily developed than systems that require special new technology, inputs, functions, practices, or institutions. Systems that can be started at a small scale without long-term commitments are more easily developed than systems that require a large-scale unit at some level and hence require large investments at considerable risk.

NOTES

BASIC TERMS

Select someone as recorder for your group.

Please read the definition given for each of the following terms. For each term, interpret the meaning in the local context of your clientele. What do clientele call it; think about it? Write in your explanation of what that term means, or how it is regarded in your assigned area. Under example: find at least one example to illustrate the term.

When all the small groups are finished, you will have an opportunity to discuss your definitions in the larger group.

1. Price

Market prices indicate the average valuation placed upon particular products by members of the society: price is someone's value of a product expressed in "dollars and cents."

What does this mean in terms of the local context in your assigned area? Write in your own words.

Example:

2. Supply

A schedule of the quantities that will be produced (over the long run) or offered for sale (in the short run) at all probable prices at one particular time and in one particular place.

Definition in local context:

Example:

3. Demand

A schedule of different quantities of a commodity that a given population will buy at different prices at a given time and place. Effective demand consists of both a desire for the product and the ability to pay for it. If either is absent, demand will be ineffective in the market place.

Definition in local context:

Example:

4. Elasticity

Various goods differ in the degree to which the quantity (Q) bought responds to changes in their respective price (P). When a cut in price raises the quantity bought so much as to increase total revenue (PxQ) we consider the demand elastic.

When a cut in price results in an exactly compensating rise in quantity bought leaving total revenue unchanged, we speak of unitary elasticity of demand.

When a percentage cut in price evokes so small a percentage increase in quantity bought as to make total revenue decrease, we consider the demand inelastic.

Definition in local context:

Example:

5. Risk and Uncertainty

Where an individual perceives alternative outcomes to a particular action. Under risk, the individual knows from experience or has a basis for calculating probabilities of the alternative outcomes, but under uncertainty, he has no basis for calculating probabilities, so he uses subjective probabilities or he guesses.

Definition in local context:

Example:

6. Costs

The expense incurred, in money and/or in kind, when a person takes possession of a good, or acquires a service through a transaction, or the expense incurred, in money and/or in kind, in the conduct of business, even when no explicit transaction occurs. Costs consist of both variable and fixed costs.

Definition in local context:

Example:

7. Marketing Costs

All of the expenses incurred to bring the goods--in the place, time, and form required--from the producer to the consumer.

Definition in local context:

Example:

8. Profit

The difference between the total revenue of a firm in a given time period, and all costs incurred by the firm for that same period.

Definition in local context:

Example:

9. Gross Margin

The difference between the unit price a firm pays for a product and the unit price it charges its customers. May be expressed in absolute terms--$ per unit, or relative terms--percentage of the selling price.

Definition in local context:

Example:

10. Net Margin

Gross margin less per unit cost incurred from the moment the product is purchased to the moment it is sold.

Definition in local context:

Example:

11. Turnover in Marketing

The number of times a particular stock of goods is sold and restocked during a given period of time.

Definition in local context:

Example:

12. Standardization

Concerned with establishing and maintaining adherence to norms (e.g., measures of quality and quantity). It assists buyer and seller, reduces transportation and storage costs, and reduces risks.

Definition in local context:

Example:

13. Grading

The process of placing goods into established categories in accordance with established standards or norms.

Definition in local context:

Example:

14. Final Consumer

An individual who purchases or receives goods and services for personal or household use.

Definition in local context:

Example:

15. Middleman

Any individual or institution operating between the primary producer and the consumer and performing marketing functions:

Definition in local context:

Example

16. Wholesalers

A person or institution mainly concerned with selling to those who buy for resale or for other than personal use (such as food processors or manufacturers).

Definition in local context:

Example:

17. Retailer

Person or institution mainly concerned with selling to final consumers.

Definition in local context:

Example:

18. Risk-bearing

Accepting profit as a reward and the possibility of loss through product deterioration or changes in value due to supply and demand conditions. A certain amount of risk may be shifted to the middleman by the primary producer.

Definition in local context:

Example:

AGRICULTURAL DIMENSION TO MARKETING

19. Seasonal Variation in Prices

Seasonal price behavior is a regularly repeating price pattern that is completed once every twelve months. Such a regular pattern might arise from seasonality in demand, seasonality in supply, or a combination of the two. For instance, one might visualize a continuous, constant supply over a year with regular shifts in consumer demand, related to factors like climate and holidays, which results in a seasonal price pattern.

Most agricultural products are characterized by some seasonality in production and marketing patterns. For crops, seasonality arises from climatic factors and the biological growth process of the plant.

For livestock and livestock products, seasonality of production arises for diverse reasons including seasonal variation in climatic conditions, in feed supplies, and the biological characteristics of the production process.

Definition in local context:

Example:

20. Derived Demand

Derived demand is used to denote demand schedules for inputs which are used to produce the final products. Corn, for example, is an important input in the livestock industry in the U.S., while wheat is used to make a variety of bakery goods. Thus the demand for corn and wheat is derived from the demand for end products.

Definition in local context:

Example:

21. Perishability

Commodities can be classified by degree of perishability which refers to the time a commodity will spoil or become unfit for consumption. Commodities such as cabbage, strawberries, or milk must be marketed very quickly under controlled temperatures to avoid spoilage. At the other extreme, there are commodities such as wheat, beans (pinto), etc. that store well for many months with only minimal environmental protection. Moreover, the types of pricing, marketing cost and other coordination mechanism are affected by the degree of perishability.

Definition in local context:

Example:

22. Pricing Methods

There are various methods used to arrive at prices for farm products around the world. Individual bargaining or haggling between buyers and sellers is still the most common method of pricing farm products. In organized markets, auctions or commodity exchanges tend to replace individual buying and selling as the volume sold increases. The following categories cover most of the pricing systems employed in agriculture:

a. Individual negotiation -- based on individual negotiations between buyers and sellers without benefit of a formal market. This method is a relatively expensive method of determining price if a high value is placed on time. However, in less developed countries where alternative uses for family labor are limited, there may be little or no real cost to society if an individual spends half a day in a market selling a few pounds of produce. This system of pricing becomes progressively less satisfactory as the volume of production per farm increases and the opportunity cost of time spent in negotiation rises.

Definition in local context:

Example:

b. Organized exchanges on auctions

Organized markets are structured to give all potential sellers and buyers open access to each other. These markets have a set of formal rules or customs that regulate the time and place of trading, obligations of each party, mode of transaction, etc. A number of internationally traded commodities such as cocoa, sugar, and rubber are priced in this way. Such commodities are sufficiently homogenous that reasonably accurate and consistent grade standards can be maintained.

Auction markets provide facilities for arriving at prices for those commodities which are more difficult to standardize, such as live animals or tobacco. Physical inspection of these items is important since quality varies greatly. Under the auction system, buyers are able to observe each animal or each lot of produce. Prices are then determined on the basis of competitive bids of each lot. A disadvantage is requiring the physical assembly of the product to be sold at a particular location and time.

Definition in local context:

Example:

c. Administered pricing

Administered pricing used to describe all pricing where the seller announces a non-negotiable selling price or a buyer announces a firm paying price. Mostly processed or manufactured products of agriculture are sold by administered pricing.

Definition in local context:

Example:

d. Collective bargaining

In bargaining the representatives of producer organizations negotiate (bargain) with processors to set a price that usually will apply to an entire season's marketings.

Definition in local context:

Example:

e. Formula pricing

Formula pricing is a hybrid. Product is delivered following negotiation of plus or minus margins from a later published price quotation. The base quotation can come from an organized market.

Definition in local context:

Example:

Objective (what will your clientele know or be able to do after being exposed to your teaching):

Technique (assist your clientele to interact with the concept):

Materials or equipment needed:

III. BASIC TERMS AND CONCEPTS

A. Marketing in general

Objectives:	The participants will be able to recognize and define common terms used in marketing and express them in the local context of their clientele and give an example of each.
Techniques:	Worksheet used to facilitate group discussion.
Materials needed:	Handout #10.

(The participants need to be familiar with a number of terms to analyze agricultural marketing. Some of these terms may only need a short definition, while others will need to be addressed with more detail.

Handout #10 is designed to allow the participants to interact with the terms in small groups, then with each other in the total group. Divide the group into smaller groups of 4 to 5 people and ask them to use the worksheet to guide the discussion in their group. Depending upon the time available you may want to ask each small group to work with only a few definitions rather than have all groups work with all definitions. Only the first 18 terms should be covered at this time. The other terms will be included in the exercise on "Agricultural Dimension to Marketing."

After the groups have had time to work, bring them back into the total group and facilitate sharing and discussion of their definitions and examples as needed.)

B. Agricultural dimension to marketing

Objectives:	Participants will have interacted with each of the remaining terms in handout #10, and also practiced facilitator skills in helping their client systems interact with the terms.
Techniques:	Each group will determine how to explain each remaining term to their usual clientele.
Materials needed:	Handouts #10 & #11.

(The remaining terms in handout #10 apply more particularly to marketing in agriculture. Divide the large group into smaller groups so each person can interact with these terms and also define and practice facilitator skills. You will need seven groups. Ask each group to take one of the terms and decide how they could best help their audience interact with the term without using the lecture technique. Their charge is to choose an audience and plan how to best explain or teach that term so that their audience will be able to understand and apply the term if possible. They can use handout #11 to assist them in a step by step approach to planning.

Help the groups to think of this as practicing a teaching skill, i.e., choosing techniques to allow the learner to interact with the information. Assure them that you will be there at all times and that you will be inserting your ideas on how a particular concept may be taught, as well as helping to accurately interpret the facets of each concept. It may not be so important that each group actually teaches the concept as that they have a chance to struggle with how to teach it given the characteristics and interests of their particular audience, and actually how to allow the participants to massage the concepts. This facilitator skill does not come easily [it is easier in some cases to lecture] so don't be suprised if there is some difficulty on the part of the participants with involving the group in active learning.)

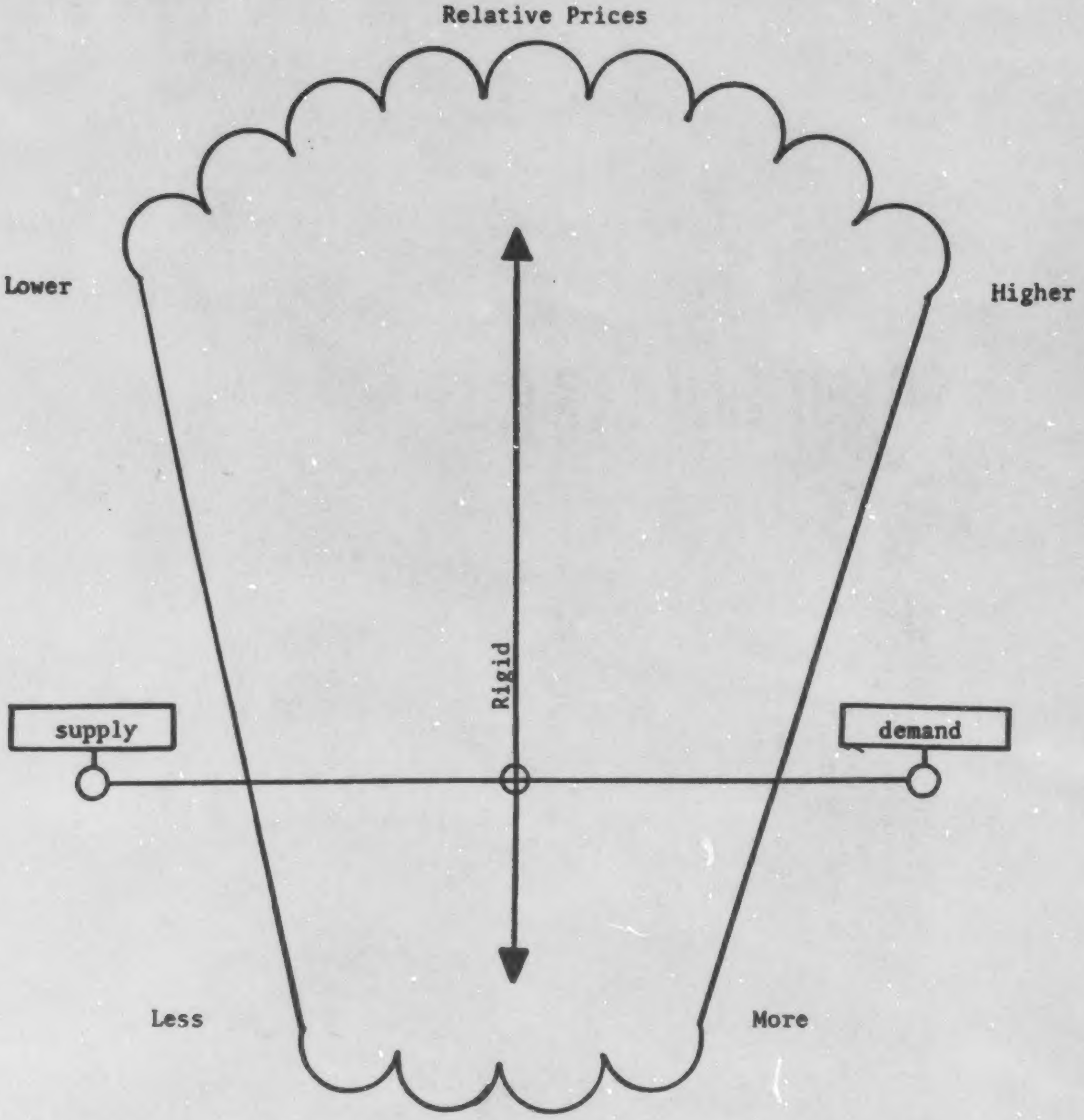
Note: Price discovery, handout #12, and the Supply and Demand Visual, handout #13, are included at the end of this unit to be handed out before the market simulation unit begins.

"PRICE DISCOVERY"

In any particular market if the actual supply and demand conditions are fully known to all sellers and buyers at all times, if judgment of individual sellers and buyers in translating these conditions into offers and bids were about the same, and if competition among middlemen were always perfect, the prevailing price for a well defined commodity in that market at any time would approximate the "true" supply and demand price. No seller would be willing to accept a lower price, and no buyer to pay a higher price than that "true" price. Yet in reality such information, judgments, competition, and commodities are never perfect, consequently market prices fluctuate up and down around a "true" price.

The process of offers and bids on the part of sellers and buyers as described above is constantly going on in various markets for agricultural commodities. There is an experimentation necessarily involved in determing supply and demand conditions and thereby arriving at a price reflecting those conditions. This process of registering the market operators' judgments of estimated supply-and-demand conditions, and their translation into price, has been termed the 'discovery' of prices. This process is often very distinct from "price fixing" in that "discovery" implies that market traders are attempting to ascertain or find a price that in itself is beyond their control, as opposed to a price arbitrarily imposed or "fixed" by them. The prevalent fear among government officials and local academicians is that collusion or price fixing rather than "price discovery" is commonly practiced. Yet, that is often a fear founded on a lack of understanding rather than fact.

Visual - Supply & Demand


Relative Prices
Lower
Higher
Rigid
supply
demand
Less
More

IV. MARKETING IN ACTION

Objectives:	Participants will be able to identify at least two specific effects that each sector of a marketing system (production, processing, and consumption) has upon price. In addition, participants will be able to identify at least one relationship between each sector.
Techniques:	Members of the class play roles of producer, processor, and consumer in a market simulation.
Materials needed:	Play money as detailed in instructions to facilitator (or cards or paper representing denominations); pieces of paper or cards representing wheats; designated spaces for each processor; stapler; handouts #14, #15, and #16.

Note: We plan to use this simulation twice in the workshop. The first time you will need to play the game straight according to the instructions. However, you will need to be planning changes or innovations to include when the technique is used later in the workshop. More suggestions are included later in the module.

(This simulation* is designed to give the participants an understanding as to how the price system operates from consumer back to farmer. It emphasizes how the individual consumer, processing firm, and farmer operate in a free market. Considerable uncertainty exists at all levels. Few market-support institutions are included. Information is not hidden, but no special structure is created to transfer information. Capital is concentrated with consumers; no provision is made for creating financial arrangements, but no restrictions are imposed either. Innovations are acceptable. However, restrictions may need to be imposed if the market structure begins to change from one which generally resembles that of a free market.

1. The marketing channel consists of consumers, processors, and producers. There should be about 8 to 12 producers, 3 or 4 processors, and 4 to 6 consumers. Each processing firm should have 2 people; so total number involved is from 18 to 26.

2. "Wheats" are used instead of Bushels so that prices can be stated in even dollars. Mechanics of the game can work with physical currency, rather than numbers written down. It is hoped that this will help people visualize what happens in the market and also, perhaps, make trading more exciting for the students.

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*We are indebted to an unknown author from the Agricultural Economics Department at Michigan State University, East Lansing, MI for this simulation.

3. Each farmer probably will choose to produce an average of 4 wheats and has 2 wheats from preceding harvest. If there is 1 processor for every 4 farmers, and the processor has 2 breads on hand, therefore about 20 units per processor can be expected. Each bread probably will end up with a retail price around $50. Hence, if all production is purchased, and if there is 1 consumer for 2 farmers, each consumer needs at least $500.

4. Processors should be located at different parts of the room, perhaps with a table in front of them, so that they are obvious. Farmers and consumers can go to processors, or processors can leave their table. If they move their table, the instructor can intervene by asking their reasons for relocation of their plant or sales office.

5. Consumers may turn in as many Breads each period as they wish to one of the facilitators. The attempt to maximize their well-being according to the following point system:

Breads turned in during one period	Points	Marginal points	Critical price*
1	10	10	100
2	19	9	90
3	26	7	70
4	31	5	50
5	34	3	30

*$10 on hand at the end of the game earns 1 point. So these represent the maximum prices of a Bread that make consumers indifferent between buying and turning in another unit or keeping the cash.

6. The game should last from three to five periods. Periods can vary from 20 minutes for the first period and 10 to 15 minutes for succeeding periods. Participants should not be told the exact number of periods the game will last. If they know the game will stop after a particular trading period, trading may become erratic in the last period. Otherwise timid consumers might spend large amounts. Processors may try to dump all inventory, etc.

7. The time sequence would be as follows:

(1) Explanation
(2) Trading period #1
(3) Production decision by farmers
(4) Trading period #2
(5) Trading period #3

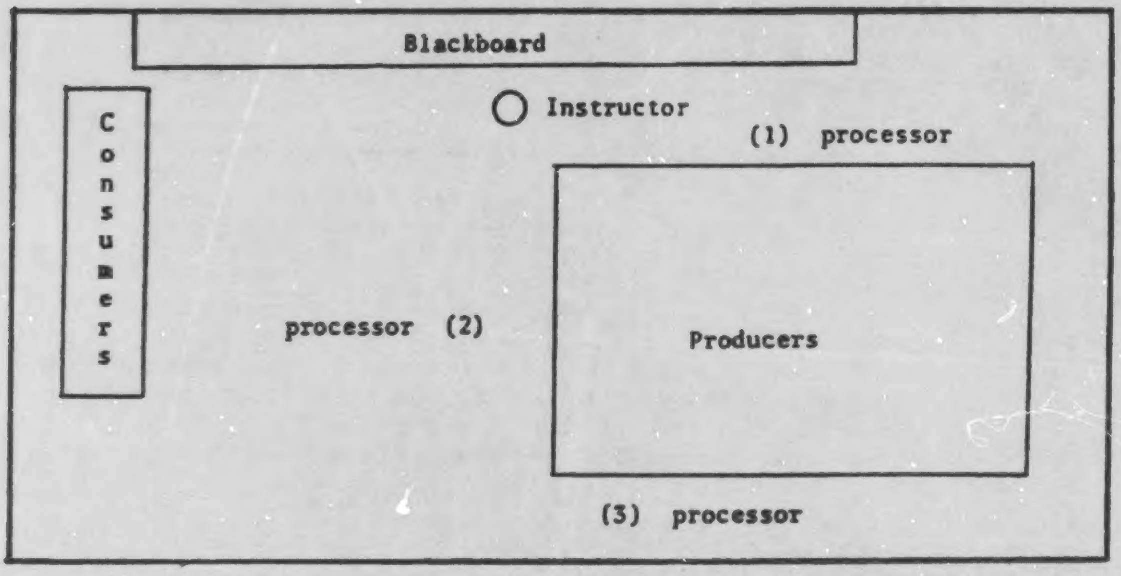
(6) Trading period #4
(7) Trading period #5
(8) Discussion and summary

Optional

8. No formal credit institution should be set up. The instructor could suggest that any credit arrangements are allowed by anyone. The instructor should keep an eye open for any delayed payments to farmers or prepayments by consumers in order to point these out in the discussions.

9. No mention of collusion should be made at the first of the game. If collusion is detected, the instructor should intervene, point out to class what is happening. Those colluding might explain what advantage they hope to gain by pooling resources. However, the instructor should probably then impose the rule that no further collusion should be done so that the game will continue to remain representative of a free market system. Effects of market power should be pointed out in each summary.

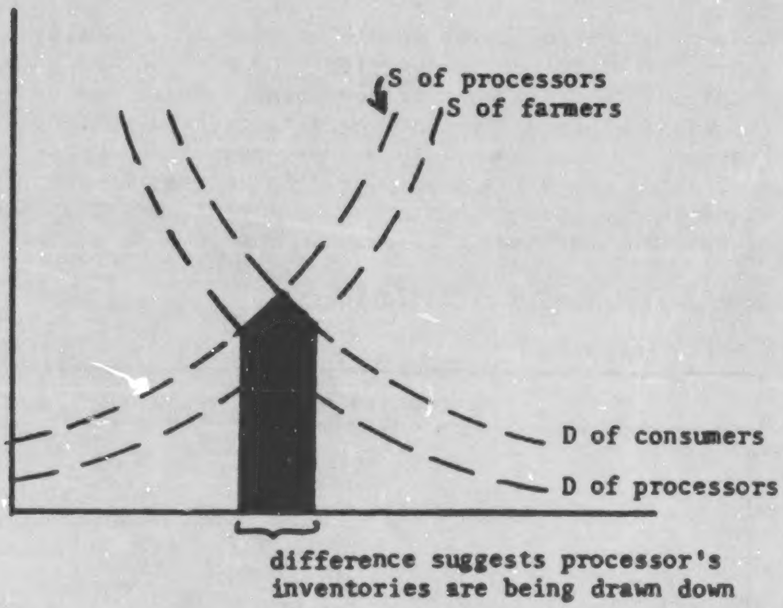
10. Room design should be as follows:



11. After two trading periods, the importance of market information may be observed by most participants. The instructor could do some market analysis at the consumer level to aid trading and to show importance of this kind of information. The instructor could use five minutes to canvass consumers and get their reactions to different prices. The question could be, "how many units would you be interested in buying next period for a price of $_____." Presumably, a reasonable-looking demand

curve will result. A supply curve (processor's willingness to sell) could be done at the same time. The resulting equilibrium price and quantity relationship could be compared to that of period 2 and, later, to that of period 3.

12. During the next summary, the same could be done for the Farmer-Processor level of the market. A comparison of the two markets could be made.



Since consumers are supplied with nearly all the money in the game, they are at liberty to buy and sell wheat or bread or to loan money. If they buy wheat for resale in a later period, it will cost them $2 per period to store it. If they buy bread for resale to another consumer, no storage costs are incurred.

After the simulation is completed you may want to use the following questions to begin discussion in the group.

What happened from the consumer's point of view?

What happened from the processor's point of view?

What happened from the producer's point of view?

Was there information available, and what part did it play?

What information does each group feel would have been useful to function better?

What would have happened if:

- a drought had occurred?
- unemployment and recession had occurred?
- government programs had been implemented?
- information had been added from different parts of the system?
- restrictions had been placed on processors, etc.?

GUIDE FOR CONSUMERS

You are beginning with $500 and one unit of bread on hand. You may "consume" bread by turning one or more breads in to the instructor and gaining points according to this schedule (for each round):

1 Bread	10 points
2 Breads	19 points
3 Breads	26 points
4 Breads	31 points
5 Breads	34 points

You also get 3 points for every bread in inventory at the end of the game and 1 point for every $10 on hand at the end of the game.

Your goal is to maximize total number of points. There will be three to five trading periods in which you may buy bread. Record each transaction carefully. The consumer buying at lowest average price gets an additional 10 points at the end of the game.

At the end of the game, total the number of points you have earned, using the form on the reverse side.

Name ____________________

Purchases of Bread:

Number Purchased	Price per Bread	Total
Total		

Average purchase price = $\frac{\text{total amount spent}}{\text{number purchased}}$

Consumption:

	Number turned in each period	Points
Period 1		
Period 2		
Period 3		
Period 4		
Period 5		
Total		

Total consumption points ____________

Number of breads left over ____________

Times 3 points for each left over ____________

Money left over ____________

Divided by 10 ____________

TOTAL POINTS 76 ____________

Handout #15

GUIDE FOR FARMERS

The two wheats you have were produced last year and stored. Cost to produce these two wheats ($38) plus storage costs ($6) amount to $44 for both or an average of $22 per wheat. You have already paid these costs.

Payment on your farm mortgage this year is $30. This obligation must be paid whether you produce more wheat or not.

You will have a chance to sell any of your available wheat to processors before producing more wheat. Any wheat not sold during the trading period costs an additional $1 for storage. This same figure will be applied to all wheat on hand at the end of each trading period.

After one trading period, you may produce wheat. Only one harvest will be made in the entire game. Carefully consider the total costs shown in Table 1. When you decide how much to produce, the instructor will give you the desired number of wheats. You need no cash. Simply record the "transaction" so you will be able to calculate your profit (or loss).

After producing wheat, your transaction statement should include most of these items:

Storage or (one or two) wheats on hand at the end of first period.	$0, $1, or $2
Production costs for current year.	amount from Table 1 corresponding to number of wheats produced
Sale of wheats from previous harvest	record price times number of wheats sold

Table 1

Production Costs

Number of Wheats to be Produced	Projected Cost of Production
1 wheat	20
2 wheats	38
3 wheats	54
4 wheats	69
5 wheats	85
6 wheats	104
7 wheats	130
8 wheats	165
9 wheats	215

There will be two to four additional trading periods in which you may sell wheat. Record each transaction carefully. At the end of each period, add $1 storage cost for each wheat not sold.

At the end of the game, calculate your profit or loss statement using the form provided and hand into the instructor.

Name______________________________ Date____________________

Transaction Statement - Producer

Transaction	Number of Units	$/Unit	Cost	Revenue

Profit (Loss) Statement

Sales Revenue	$+
Value of ________ wheats not sold at $_____ per wheat	+
Cost of 2 wheats from previous year	- 44
Production costs of wheat this year	-
Storage costs	-
Mortgage Payment	- 30
Profit (or Loss)	$

Name ______________________________ Date ____________________

Transaction Statement - Producer

Transaction	Number of Units	$/Unit	Cost	Revenue

Profit (Loss) Statement

Sales Revenue	$+
Value of ________ wheats not sold at $_____ per wheat	+
Cost of 2 wheats from previous year	- 44
Production costs of wheat this year	-
Storage costs	-
Mortgage Payment	- 30
Profit (or Loss)	$

GUIDE FOR PROCESSORS

You are beginning with $125 and two breads (processed wheats) in your warehouse. Since there are no retailers in this simplified market situation, you sell directly to consumers. Your incure three kinds of costs:

Buying wheat
Processing
Payment on a loan to bank

You must buy wheat from farmers with cash. Processing is done by folding and stapling the wheats you buy. Processing costs are $15 per wheat processed into bread. This cost is not paid with cash. Instead, simply record the appropriate cost on your "transactions statement". Processing costs are incurred at the moment "BREAD" is written on the wheat. Once a wheat is processed, it cannot be "unprocessed". The $15 is already spent whether the bread can be sold or not.

You have a considerable investment in storage facilities and processing equipment. This year $60 is due on your loan from the bank. You need not pay this in cash; simply record the amount as an expense on your income statement.

You incur no regular storage costs except for wheat or bread on hand at the end of the game. You must add $5 for each wheat and $5 for each bread you have on hand at the end of the game.

Cost of the two breads you have in your warehouse are roughly $22 each purchase price and $15 each for processing or $74 total for both. (For simplicity, storage from last year to this year is ignored.)

Your transaction statement should then contain some of these items at the end of the game:

Name______________________________

Transaction Statement

Transaction	Number of Units	$/Unit	Cost	Revenue
Total at end of game				

Profit/Loss Statement

Sales Revenue + ____________________ $

Inventory Value

Value of _________ wheats on hand at $__________ per wheat + _______

Value of ________ breads on hand at $__________ per bread + _______

+ ____________________ $

Cost of Two Breads from Previous Year - ________74________ $

Cost of Wheat Purchased - ____________________ $

Processing Expense - ____________________ $

Loan Payment due - ________60________ $

Storage Expense - ____________________ $

Profit or Loss ____________________ $

Purchase of Wheat ____________________$

Price ____________$, Number ____________________$

Processing
$15 X Number Processed ____________________$

Sales of Bread ____________________$

Storage of Wheat and Bread
at End of Game
$5 X Number ____________________$

There will be three to five trading periods in which you may buy wheat and sell bread. Record each transaction carefully.

At the end of the game, calculate profit or loss statement using form provided and hand in to instructor.

Period #________ Processor________________

Number Wheats Purchased ________

Total Paid $________

Number of Bread Sold ________

Total Paid $________

Period #________ Processor________________

Number Wheats Purchased ________

Total Paid $________

Number of Bread Sold ________

Total Paid $________

Period #________ Processor________________

Number Wheats Purchased ________

Total Paid $________

Number of Bread Sold ________

Total Paid $________

Period #________ Processor________________

Number Wheats Purchased ________

Total Paid $________

Number of Bread Sold ________

Total Paid $________

V. THE PRODUCTION-MARKETING-CONSUMPTION (PMC) SYSTEM APPROACH TO AGRICULTURAL COMMODITIES

Objectives:	Participants will become acquainted with SaLUT's PMC system approach to understanding how commodity systems are formed. They will be able to utilize this concept as they prepare to seek marketing information and formulate ideas as to how commodity systems function and might be influenced.
Techniques:	Facilitator-led discussion based on handouts given to volunteers before the session.
Materials needed:	Handouts #9, #17, & #18, newsprint, markers.

Note to facilitator: This session will be more structured than the others, but should not evolve into a lecture.

The appendix contains information in outline form that may help you in discussing the transition from subsistence to commercial agriculture, and the PMC system. The discussion can developed around the following topics.

A. From subsistence agriculture to commercial agriculture - a system evolves

Objectives:	Participants will be able to identify characteristics of a subsistence way of life and where agriculture fits in that pattern. They will be able to identify both agricultural and nonagricultural characteristics which mark a transition phase. Participants will also be able to identify an agriculture commodity profile of the people with whom they work, showing whether each commodity is subsistence, transitional, or commercial.
Technique:	Large-group discussion
Materials needed:	Handouts #17 and #18, newsprint or chalkboard, markers, chalk

(Four sequential points are important for providing the framework for providing the framework for this discussion.

1. It is a discussion on human societal development. Human development is seen as a continuous process. This process is governed by an interaction between technical level and the environment, which produces an economic process.

2. That economic process is closely related to and integrated with the total social process.

3. There exists differences in the degree that the economic process is integrated in the total social process, i.e., social activities and social institutions. This difference has generally followed a movement from subsistence to commercial/market agriculture with all societies somewhere in transition.

4. Concentration will be on that transition, and what the implications are for agriculture. Therefore, it is necessary to understand the differences in types of coordination of the economic process in the total social process, and what that means for agriculture.

You may want to guide the discussion by asking questions which lead from the earliest historical period to the present.

For example: Period I - Human arrival and interaction with the environment.

In Papua New Guinea, for instance, humans arrived 30,000 years ago and were in the highlands by at least 9000 B.C.

What did these people do? What interactions of technical level and environment were there? What kind of production was stimulated? (Probably hunters and gatherers)

What was agriculture? (Hunting wild animals and gathering wild plants)

How was work organized?

What was the economic process of production? (Probably be reciprocity, collective sharing, redistribution, and collection controls)

Period II -

What caused the conditions in Period I to change? (How does the technical level and its interaction with the environment change?) (The agricultural revolution of domestication of animals and plants.)

What is agriculture at this point? (Care of domesticated species and harvest of wild species.)

After agricultural revolution, what roles does agriculture fulfill in total subsistence production?

For example in Papua New Guinea the relevant numbers are:

25 plants used for foods

18 used for stimulants

23 used for treating cuts

52 used for treating sores

49 used for treating pains

25 for childbirth and fertility, etc.

115 used for magic
80 used for weapons and tools
39 used for canoes and rafts
136 for house building
46 for textiles and
90 for food preparation and utensils
90 for decoration
60 for art ..... etc.

How was the work organized?

What were the major ceremonial activities?

How was status acquired? (In Papua New Guinea, it was by giving gifts, extending credit.)

What is the role of religion and transaction with spirits? How does it relate to agriculture? (Perhaps ensure agricultural success by ensuring right task done by right person at right time.)

How was education acquired?

(During this period, the economic process was determined largely by non-economic factors.)

Period III -

What caused conditions in this period to change? What changes in technical level and interaction with the environment came about? (Increased specialization?)

How was work organized? Along increasingly specialized lines?

How was the economic process coordinated with the social process? (Trade)

At this point, economic process increasingly became that part of the social process which rationed scarce resources. In social process, some goods move toward market/commercial production and at that time the transition from subsistence to commercial production has begun.

How does this affect agriculture?

Are some products more indicative of commerical production than others? Which ones, etc.?

B. What is a production-marketing-consumption (PMC) system?

(The PMC system is defined briefly in handout #9 and more material is provided in the NSF report on new crops included in the bibliography. Direct the volunteers' attention to the figure that illustrates the general PMC system. Point out that this is at best an abstract representation of what could happen from field to table. Encourage interpretation of the concept given in the earlier discussion.

Material included in outline form in the appendix deals with a description of the items in the matrix and the PMC, what it is and how the PMC system concept can be used as an analysis approach.

As an exercise, ask each to attempt a sketch of a PMC system for a particular commodity -- allow about 20 to 30 minutes for this and discuss the results as a group.)

C. How can the PMC system concept be used as an analytical approach?

(Refer to the handout #9 on the PMC system methodology. Discuss the components included under each subsystem. Challenge the volunteers to identify the status of a common commodity such as rice or maize given the suggested PMC system components. Encourage them to suggest changes -- have the group discuss any proposed changes. The PMC matrix is not the last word; how might it be improved.

After covering most of the individual components, direct the group's attention to the categories of "physical possibility," "economic feasiblity," and "institutional permissibility." Seek definitions and examples from the volunteers before offering them those used by SaLUT [handout #9]. Again, use a commodity [perhaps, a proposed new crop] as an example so that they can relate to the PMC matrix more specifically.

The discussion should evolve towards an assessment of the systems approach as a means of integrating farmers with the rest of the economy and as a tool for determining where intervention might be most effective. A simple exercise might be developed by having each volunteer assume the role of a system participant for a given commodity and have each briefly describe his perspective toward the rest of the system. Put particular focus on information flow.)

D. Obtaining information from market participants

Objectives: Refining interview plans. Participants will have a tentative list of questions to be answered for at least one commodity system, a tentative list of who to obtain the information from (institutions, occupations), a tentative description of the logistics involved in collecting the information, and a tentative list of questions to be asked during interviews. The participants should also be able to list three principles of good interviewing techniques.

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Techniques: Handout on interviewing, buzz groups, and role playing.

Materials needed: Handouts #19 and #20.

(It is important that you assist the participants in identifying specifically the questions they need to answer in order to collect the information they need. Identifying the questions to be answered also helps prevent the collection of irrelevant information and wasting of the interviewee's time, as well as possibly damaging the credibility of the interviewer.

Handout #19, Principles of Interviewing, can be used with the group in conjunction with handout #20. Ask the group to use the two resources together. Ask them to form the teams that will go to the field and work together. Ask each group to use the commodities they will investigate, and referring to the previous newsprint lists of identified institutions and occupations, use handout #20 to plan for the interviews.

Since you have formed the teams early in the week in order that preparations for contact could be made, it is possible that the bulk of the planning may have already taken place, or that the teams may think it has. Hopefully more in depth discussion of the PMC system approach will stimulate ideas for the team in designing their information collection activities. This should give the team a chance to refine their plans, add additional plans, and focus on specific questions that the team needs to answer, the sources involved, and a step by step plan for collecting the information.

You may need to tell the group that the planning they do for the interviews may also be used by someone else when the teams do the actual interviewing, and that the group will be sharing resources on this.

One of the things the participants can do to help the interviews during the field exercise to flow smoothly and establish their credibility with the interviewee is to practice ahead of time their approach to the interviewee, and being able to explain without difficulty who they are, and why they want the information. This is something the participants can arrive at themselves, but the opportunity to actually practice their approach in a nonthreatening situation ahead of time may be useful.

You will need to set the scene, allow each participant time to arrive at an approach, and then allow them to role-play or practice in pairs. Then you may want to select some of the participants to role-play in front of the total group.

Make the climate for this role-play as nonthreatening as possible, and try to select people for the demonstration in front of the group who will not mind group discussion of their approach.

Some method of sharing the results of the work must be arranged. You might want to come back into the total group and discuss each group's efforts, getting discussion or modification suggestions from other participants.

The work of each group should be displayed where anyone can look at it any time. You may want to give the groups more time to work on their handout after the total group discussion and before posting.

Remember to stress with the participants that they are developing the approach and the instruments they will use as they actually interview market participants later.

Handout #21 may be handed to the group and discussed at your discretion. The intent of the handout is to assist the members of the group in being open to the information they receive, particularly in terms of roles and functions of middlemen and opportunities for entrepreneurs, while identifying possible entry points for Peace Corps Volunteers while working with the system.)

Marketing in "Transitional Agriculture"

Marketing by its nature implies an exchange and flow of products whereas subsistence agriculture denotes production and consumption within a relatively closed environment, such as the household or small local community. As farmers begin to produce more and more commodities or shift from low value to higher valued commodities for exchange or sale purposes, the role of buyers at the farm or village level increases and varies depending on the production conditions, such as small sales of surplus crops or larger sales of cash crops. Food grains, feed grains, oil seeds, fibers (such as cotton and kenaf), fruits and vegetables, other crops (such as tobacco, sugar cane, rubber, and mung bean), and livestock and poultry are among the major types of agricultural commodities that can be marketed. Also, the wide variety of household produced, non-agricultural commodities, such as hand tools, mats, pottery, and woven clothes may have market potential and can be of value to farmers shifting from self-reliance to integration into a market economy.

The nature of that transition into product sales also has implications on the input side. With commercialization also come the market for and purchase of chemical and seed inputs, various raw materials for processing (such as reeds, silk cocoons, and car springs), small hand or engine operated equipment and machinery and others. Extension systems for teaching new technologies, infrastructure to link transportation and communications systems, etc. are a few of the many changes that will evolve as commercialization increases over time. Consequently, it is extremely important that each person carefully assess where in that continuum of transition his clientele or area of involvement is so that marketing problems and potentials can be properly identified.

Marketing Characteristics in Three Types of Economies

1. Traditional subsistence economies

In these economies, most of the people earn their livelihood from the land, they eat what they produce and have little left over to market. Changes in the production system are taking place slowly and marketing services, practices, and facilities are likely to accomodate themselves to needs as they emerge.

In many countries or regions thus characterized, the distance between producer and consumer is small, physically and culturally. Because little is transported to market, the means of conveyance and the condition of the roads are not overly important. Time may not be highly valued, particularly when not committed to the demands of a commodity's production cycle.

Transactions in the market are often made directly, as between the farmer's wife sitting in the market-place and another farmer's wife or a village housekeeper. While differences over price and quality of product will be discussed by both parties to the transaction for some time, this is more in the nature of a game played out by each than of basic differences, lack of confidence, or outright hostility. The product can be seen, smelled, weighed, and tasted, so that the chances of error, misunderstanding, or malfeasance are minimized.

Moreover, there is a limited variety of commodities brought to market and an equally limited variety making up the bulk of the consumers' diets. Hence, there is a familiarity with the products and variations of size, appearance, and taste may be recognized as being within an acceptable range. The range of acceptance is likely to be broad because expectations are not high. For these reasons, regulations on the quality of commodities entering into commerce are not a critical factor in product movement or consumption. For similar reasons, the demand for other marketing services is not strong. The producer may, at time of harvest, wish there were more ample storage facilities on his land or in the village so that more of his production might be held off the market and preserved for a longer period of time. And, as production increases, this may be one of the first needs the individual farmer or a group of them will seek to satisfy.

2. Transitional agricultural economies

Developing countries are becoming increasingly urbanized and hence more market-oriented. Estimates are that shanty suburban populations are growing at the rate of 15 percent annually in many African and South American countries and most analysts do not see signs of slowing down. Indeed, if increased production of basic food crops on larger commercial farms makes more small farms marginal, one can anticipate a continued swelling of urban populations. In short, increasing urbanization will continue to force more marketings over greater distances for many LDCs.

- Be a good listener and refrain from interrupting.
- If you must take notes or record what the interviewee is saying, it is best to simply ask permission to do that, and if given, do it in the least disruptive manner possible. If the information is something you can remember, then you might consider refraining from taking notes, then write the information down when the interview is completed.
- Willingly restate or clarify questions if the interviewee requests you to do so.
- Actively show interest in what the interviewee is saying, either verbally or through body language or both.
- Give the interviewee time to respond adequately. Don't hurry the interview.
- Give time for a brief conversation with the interviewee after you have collected needed information and before you leave. This time helps the interviewee recognize him/herself as a person of worth apart from a source of information and increases good feeling about the interviewer.

are unloaded from ships and moved directly to the large coastal cities where need is usually greatest. Little internal transport is required to accomplish this. When a larger portion of the food crops needed in these countries is being met by their own production, a more extensive transportation system needs to be built to bring commodities from the principal producing areas to the cities which are the principal consumption areas. [A similar (but reverse) system is needed to move manufactured inputs for farms from the cities where they are produced to the farms where needed as part of the high-yield technology.]

Animal transport no longer suffices when commercial farmers have greater quantities to sell and need to seek larger markets at greater distances. Hence, the need is for roads and transportation systems that can move more products, more rapidly, and at low cost. Greater speed and lower per-ton-mile costs are vital since more commodities move greater distances. Transportation is a significant factor in the spread between prices the producer gets and the consumer pays for farm products. If the transport system is inadequate and contributes to increased spoilage, consumer and producer prices are likely to reflect the losses incurred.

Among the issues raised by requirements for better transportation is which commodities or growing areas or consumer centers should get highest priority in a planned network of roads. How can policies on imports of vehicles and parts contribute to the maintenance of an efficient transport system? How are policies and priorities for the transportation of agricultural commodities related to those of other sectors in the economy? And, since transportation networks require considerable capital investment, how might such requirements for such related facilities as ports, central markets, etc.?

Storage is almost as pervasive an issue as transportation when commercial production of crops increases and significant amounts of grains and/or perishables are produced above immediate market requirements. There are several critical issues in attempting to meet storage requirements. First, which commodities should have priority access to storage? In many countries one or two food grains are involved and the storage for one commodity precludes the building of storage for another. A second issue is that of locating facilities. In countries where imported food grains were an important part of their supply and demand situation, modern storage facilities were often built at port cities, thereby facilitating off loading and feeding of needy populations. As countries produce more of their own crops, it may be more desirable to have storage facilities close to the production areas. This is particularly important where the storage is associated with cleaning, grading, and milling operations. But the location of storage facilities may also determine which producing or consuming regions of a country are likely to be favored with more stable supplies and prices. And, at times, location may favor large producers over small producers (or vice versa). A third issue pertains to ownership of the storage facilities: government agency, private trader, or farmer organization. Ownership of storage facilities provides a measure of control over the price the farmer receives and the price the consumer pays. Private traders may influence actual price by their interpretation of a commodity's quality (against government standards) so that, even where there are minimum prices, the farmer may get something less. Traders may also influence prices paid by limiting how much of a commodity they will accept for storage or the terms underwhich acceptance is made. Ownership by farmer groups often means control by larger producers and may aggravate differences between them and the small farmer. Capital and credit requirements for building and operation need also to be taken into account in policies to give producers or others more control.

Services

The demand for more services in connection with commodity marketing arises not only from increased volume but also from the altered relationships among producers, distributors, and consumers. In many instances the buying and selling will be done by intermediaries, and the personal knowledge, understanding, and trust that could be anticipated in face-to-face transactions will be absent.

The need for better market news and information about prices and commodity flows increases as crops move greater distances and may be shipped to alternative urban markets. Informal information systems no longer suffice. At the same time, market news, to be meaningful, requires widely known and accepted standards of quality and containers for commodities being marketed. Such standards need not only be promulgated but also policies made to assure conformance and continuing confidence by all parties to the transactions. At issue then is not only the rules and regulations laid down, but how widely they are known and adhered to.

The amount and kind of marketing services demanded as agriculture becomes more commercial and populations more urban will vary with the variety of commodities coming to market, the income levels of the population, and the extent to which the population is concentrated in one or more cities. Each commodity requires its own complex of services to facilitate transactions and movements. With higher incomes, people are likely to spend more on marketing services to increase the convenience or quality of the commodity. More wheat will be wanted as bread, more milk will be bought in pasteurized form, and more fruits and vegetables will be eaten in lieu of food grains; these changes involve more handling in the marketing process.

A full array of marketing services and an abundance of marketing facilities are not likely to be needed in the initial stages when countries move from a largely subsistence to a more commercial agriculture. What is needed are incremental additions to existing services and facilities. These additions should be designed to avoid bottlenecks in the changeover and to facilitate the growth of a commercial, consumer-oriented agriculture. Hence, the question needs to be asked as to what kinds and forms of services add to the efficiency of the marketing system in the period of transition from traditional to commercial agriculture.

3. Market-oriented agricultural economies

At some point in the development of a country, there is a shift associated with changes in the distribution of population from rural to urban areas that carries with it many related alterations in marketing institutions, the kinds and scales of marketing enterprises, and the role of government as facilitator and regulator of marketing processes. Marketing analysts should note such signs and thereafter devote more attention to marketing from a consumer point-of-view. Analysts need not pinpoint the time of such a shift; it is not susceptible to close identification nor will it be the same for all countries. But the importance is one of concept and condition rather than of timing.

One of the important differences that occurs is that the interdependence between rural and urban economic activities becomes more evident and the interconnection may be visualized more clearly as a system of transfers or movements of goods, services, and capital resources. Transfers become more evident because of the greater specialization of families in urban and rural areas as both production and consumption units. The interdependence of these varied units and the need for coordinating mechanisms bring about profound changes in marketing systems.

PRINCIPLES OF INTERVIEWING FOR THE PURPOSE OF GAINING INFORMATION FOR DECISION MAKING

Interviewing can be rewarding for both interviewer and interviewee. For the interviewer it can be a method for gaining information for use in decision making, it can allow the interviewer to meet new people with different views, attitudes, and frames of reference, and a good interview can provide a feeling of satisfaction that flows from establishing good interpersonal communication and rapport.

For the interviewee it can provide an opportunity to express ideas, to be accepted as a person whose knowledge is of value, and also a feeling of satisfaction from good interpersonal communication.

Developing a good interviewing technique requires a concern for people and willingness to listen. With this attribute, and attention to a few basic principles, you can conduct constructive interviews.

Decide ahead of the interview what questions you need answered and what information you need in order to answer them. Collecting extraneous information wastes the time of the interviewee and may damage your own credibility.

Once the interviewee who can give you the information has been chosen and contacted there are principles of interviewing you need to keep in mind.

- Make sure the interviewee is willing to talk to you, and willing to give the time you need. If not, arrange a different time at the convenience of the interviewee, or find another source of the information.
- Explain as clearly and concisely as possible who you are, the purpose of the interview, and how the information is to be used.
- Establish a positive atmosphere for the interview, be sincere, and accept the interviewee as a person with valuable information. Show interest in what the interviewee has to say without passing judgement.

With a larger proportion of a country's food crops needing to go to urban markets and more production available for the commercial market, certain kinds of problems, characteristic to the stage of development, become evident. A general expansion of the marketing system is needed, requiring new policies and more facilities and services.

Policy considerations

Government policies establish a framework within which marketing systems work and influence how the product of the society is distributed. Public policies may provide positive direction and government agencies may take on many of the marketing functions. Or, the government may leave much of the direction and operation in private hands, although allowing the marketing activities to be performed with little intervention on the part of government is itself a decision with wide ranging influence on the structure and development of marketing systems. At each stage of development in the country's agriculture and its associated marketing system, the government may be concerned with important decisions or trade-offs between alternative courses of action; e.g., should price policies provide an incentive for farmers to produce more or a means for consumers to buy more? Should priorities on crops encourage those for export and foreign exchange earnings or those that may satisfy domestic food needs? Should credit policies further the production of crops or encourage the development of a food processing industry? There are also policy considerations concerned with broad socio-economic issues affecting marketing. Should the government have a food and nutrition program specifically concerned with improving the diets of the very poor and the most vulnerable groups? Should policies deliberately favor labor intensive rather than capital and scale efficiencies in the development of marketing enterprise?

Policies of LDC governments contribute to changes in marketing and are also a reaction to changes that take place in the marketing system. In either event, public policies need to be closely associated with the modifications in marketing systems as they evolve. For example, price policies at an early stage of development may be largely concerned with providing production incentives to obtain increased output to meet domestic demand. At the transitional stage, price policies need to be flexibly geared to maintaining a reasonable balance between the amount that may be produced and effective demand. The policy purpose is not then to increase production per se but to balance it against demand. Again, government policies on agricultural credit may, at one stage, give first priority to facilitating the purchase of farm production inputs; at a transitional stage, priority may go to commodity stabilization programs or financing marketing cooperatives or other private marketing enterprises.

Facilities

Inadequate facilities are among the principal problems in the transitional period. Transportation is often a critical bottleneck. The magnitude of the task of transporting agricultural commodities grows more rapidly than production itself. When a significant portion of food needs among food deficit countries is met by imports from food surplus countries, commodities

Planning Worksheet for Interviews with Market Participants

____
Commodity

In order to analyze the marketing system for this commodity, what questions do you need to answer. Be specific by writing the questions below.

1 ____

2 ____

3 ____

4 ____

5 ____

6 ____

7 ____

8 ____

9 ____

10 _______________________________________

11 _______________________________________

12 _______________________________________

For each question you want answered, write here the source of the information needed (who will you interview to get the information?)

For each of the sources of information listed indicate what procedures or logistics you will use to collect the information. Develop a step-by-step plan.

What approach will you use to the source of information? How will you explain who you are, why do you need the information. Write here concisely.

For each source of information identified, refer to the questions you want answered on page 1 of the worksheet, and indicate some tentative questions you will be asking the interviewee.

Handout #21

"To Do" activities and approaches in market problem assessment

1) Generate positive and constructive attitudes regarding the beneficial role of middlemen yet the need to further improve the marketing system through various changes.

2) Continually be attentive to opportunities (meetings, discussions, etc.) to a) identify perceived problems, b) note persons and organizations or agencies working with market-related problems, and c) present the positive attitudes mentioned above.

3) Recognize entrepreneurs within the private sector who are able and interested in expanding their business, beginning a new enterprise, or otherwise motivated to consider opportunities that exist in areas of the country in which you are knowledgeable but the entrepreneur is unaware.

4) Recognize opportunities for change which directly or indirectly impact on the marketing system;
   a) Where a new irrigation project has begun or is in the process of expanding--here a radical change in previous cropping patterns can evolve since additional water supply extends the potential cropping period as well as the options for the prevailing cropping periods. Areas near lakes, ponds, and rivers have similar potential where appropriate technology is available--yet due to higher costs of water a higher valued cash crop and effective market access become critical. This is the case of favorable "conditions for change"; other cases include new roads, arrival of electricity, etc.
   b) Where a monopoly position is held by a middleman the introduction of other buyers, promotion of new buyers, the option of existing traders including the monopolized commodity, etc. are approaches for increasing the options available to the producers. Yet, be sure the reason for the monopoly position is known and unwarranted, otherwise more harm than good may result.

c) Understand the source and nature of dissatisfaction within the marketing system before proposing any remedial actions since existing competitive forces may be at work rather than any real malfunctioning or problem. Case of "dissatisfaction" approach.

d) Locations with good access to transportation (vehicles as well as roads) and water for crop production tend to be more responsive to market changes (shifts in relative prices, such as the price of onions dropping and the price of tomatoes increasing), thus if low yields, poor quality harvests, damaged produce, etc. originate from such areas it is worth inquiring about the causes of such poor performance and initiating corrective action. Case of "expectations" approach wherein the expected does not materialize.

5) Set priorities in the selection of problem areas or types in which you will become actively involved. Balance emphasis on 1 or 2 long term or extremely difficult-to-change problems with a couple of problems wherein less effort and quicker results can be forthcoming. Large or serious marketing problems may not be solved within one tour of duty therefore the shorter term or smaller problems must also be a part of one's program so that accomplishments can reinforce one for the long term effort.

6) Learn to delegate tasks and involve counterparts in action and thinking through alternative approaches, especially in determining who gains and who loses in both the short and long term from various problems and the alternative solutions. Talking things through seems more critical for marketing than production approaches since more intermediaries (people and positions) are involved with potentially conflicting individual interests. Group concerns and involvement are especially pertinent.

7) Recognize that some problems are beyond your role and capacity and should be referred to the relevant persons with occasional follow-up or encouragement for corrective action.

8) Learn who knows what and when so that the needed information can be quickly brought to bear on a problem, such as large wholesalers knowing the general dynamics of a commodity market, such as, sources of supplies, key informants, major shippers, etc. but not necessarily the supply area problems affecting individual producers.

VI. CHARACTERISTICS OF COMMODITY SYSTEMS

(This segment of the module, perhaps more than any of the others, will require the facilitator to question, stimulate, and draw from the participants the characteristics of crops, livestock, and commodities in general that influence the nature of the PMC system.

Given the time frame in which you have to work, and depending upon how much information the group has already brought out about characteristics of the different commodities, you may want to regard the exercises on characteristics of commodities as optional exercises.

In this segment you will also be helping the participants to establish some hypotheses or some predictions about the behavior of the market participants for certain commodities.

If they are able to make such predictions they will have a basis with which to compare what they actually find during the field trip.)

A. Basic characteristics of crop/livestock commodities (optional exercise)

Objectives:	From the participants' knowledge or experience with the crop he/she will be able to identify characteristics of the crop/livestock commodities that influence the PMC system.
Techniques:	Large group discussion
Materials needed:	Newsprint and markers.

(You may want to assist the group in identifying specific categories of crops or livestock to discuss. Some of the crop categories you can choose from are: grain, vegetable, oilseed, tree, specialty [spices], or fiber. You can choose livestock categories by species after you have selected some categories [based upon the major crops or livestock species produced in the country.] You can list on newsprint the basic characteristics of crops or livestock species that affect the PMC system.

When the groups have prepared their lists, place the lists where they can be seen and referred to. You are now ready to help the participants identify basic characteristics of commodities that influence the PMC system.

You probably need to make the distinction for the group that crops or livestock on the farm become a commodity at the time of harvest or when ready to leave the farm.)

B. Basic characteristics common to commodities that influence the nature of the PMC system (optional exercise)

Objectives:	The participant from knowledge or experience will be able to identify characteristics of commodities in general that influence the PMC system.

Techniques: Forum, brainstorming.

Materials needed: Newsprint, markers.

(Serve as recorder and ask the group to identify basic characteristics of commodities in general that influence the nature of the PMC system. Record on the newsprint without judgment. Encourage the group to supply ideas without judgment at this stage. If necessary later you can assist in sorting or weeding the list. Place this list where it can be easily seen. After the list is completed, you may find it necessary to clarify what is meant by some of the ideas the group has listed. You are ready to involve the group in some prediction of system-participant behavior, given the commodity characteristics identified by the group. You can refer back to PMC system matrix here if you wish.)

C. Implied behavior for system participants for given commodity groups

Objectives: The participant will exhibit a perception of a system as a functioning whole, by predicting behavior of system participants throughout the marketing process given identified commodity characteristics.

Techniques: Groups using commodity categories identified earlier, and teams that will be working together--on the field trip.

Materials needed: Newsprint, markers.

(Since this exercise is designed to stimulate prediction and hypotheses of what teams will find in the field each team will consider the commodity it will investigate. Your instructions to the group might be something like this:)

We have identified the commodity each group will investigate and we have tentatively identified market participants by institution or occupational group. Now is your opportunity to predict the attitudes and behavior you will find within this particular PMC system.

For each tentative participant you have identified, given the characteristics of the commodity, predict the activities of that participant, the timing of those activities, the objectives of that participant, and any attitudes about the marketing process you expect the participant to have. That is activities, timing, objectives (why does he do it), and attitudes.

When you have had time to work, we'll come back into the total group and discuss your predictions for each commodity group.

(Encourage the groups to write their predictions down on paper where they will have access to them throughout the field trip, and consult them frequently.

After the groups have completed their assignment, bring the total group together, and give each team a chance to report their predictions.

As they discuss their predictions, allow plenty of time for the group as a whole to interchange ideas, tell the group that the burden of the predictions task is not on the team alone, but is the task of the whole group. Create a climate of trust and questioning, where the ideas of a team can be refined or modified. Ask the group and the team why they think this is so, or why one commodity system differs from another.

After each team has had an opportunity to present their predictions, and adequate discussion has transpired, you may want to give the teams a little more time to make changes, modify or refine their predictions about market participants.)

D. Description of local commodity marketing systems

(Handle last minute details of the field experience. Be sure the participants understand the arrangements for the field exercise and any other pertinent information they need to function for the days they will be in the field.

Let them know that each team will be expected to make a report on their system when they return, and give them a timetable for preparing their reports and when the group will reconvene.

Ask the team to be prepared to give a report that will describe the PMC system of the commodity. Ask them to include suggestions about changes they believe will improve the system. Indicate that their analysis of the commodity system will be of interest to everyone and that the group should spend some time discussing each report.

Information in the appendix that might be useful here includes some suggestions of how the teams may approach the report, or possible report formats. In the pilots, the teams were able to report on the systems with this information, plus instructions to be able to describe the PMC system to the total group, illustrating as necessary.

During the time the teams are out in the field, be prepared to lend support where necessary, make any necessary arrangements, and prepare for facilitation of the remainder of the workshop.)

VII. BEHAVIOR OF MARKET PARTCIPANTS AND DESCRIPTION OF PMC SYSTEM

(The description of the PMC system by the teams should generate enormous interest within the group. Allow enthusiasm and sharing to develop, and encourage a climate where the group feels free enough to question and add to each team's analysis. For many, this will be the time in the course when the volunteers are selecting and choosing areas where their efforts will have an effect. Allow plenty of time for the teams to prepare, present, and discuss the reports. You may want to bring into the discussion a couple of other concepts -- "ebb and flow due to seasonality," and "nonprofit motivated behavior.")

A. Ebb and flow due to seasonality

Objectives:	Teams will be able to construct a flow chart or graph that depicts ebb and flow of the supply of their particular commodity due to seasonality.
Techniques:	Each team can plot for their commodity the general availability throughout the year.
Materials needed:	Markers and 8 x 10 paper or newsprint.

(As the facilitator, you can help the teams visualize the effect of seasonality on each commodity and determine how seasonality influences the PMC system. Also, aid the group in determining how seasonality affects where changes can be made in the system.)

B. Nonprofit motivated behavior

Objectives:	Participants will be able to identify or recall instances where observed behavior of market participation was not predictable, due to motivations other than profit.
Techniques:	Facilitation of group discussion.
Materials needed:	None.

(You may want to ask the group for observations of nonprofit motivated behavior and their perception of the real motivation behind the behavior. Assist them to assess the effect this behavior has on the PMC system, and what relationship this situation has to changes or improvements needed in the system. Ask the teams to identify constraints or bottlenecks within the system as a means of identifying possible opportunities for improvement.)

VIII. SIMULATING A MARKETING SYSTEM

Objectives: The participants will be able to describe price determination and relationships between the different parts of the system as displayed during the simulation, plus describing the effects built in modifications had upon the system.

Techniques: Simulation, using the same simulation technique as in IV with selected modifications.

Materials needed: Handouts #13, 14, & 15; cards or pieces of paper for wheats; stapler; play money or paper representing denominations; space for each group; designated spaces for each processor; materials specific to each modification you include.

Since the group may have developed some new perspectives as a result of the field experience, and because some questions had been raised during the first simulation, conducting the simulation again helps to tie some loose ends together.

A second use of the simulation allows you to inject modifications to demonstrate results of drought, government programs, decreased demand due to recession, etc.

Conduct the simulation in the same way as before, being sure that each group (producers, processors, consumers) understand their instructions, before the simulation begins.

Organize the participants into the three groups, with different group makeup than before. Spend a little time with each group, explaining their role, and also explaining any modifications that they need to know about.

Again, do not tell the group how many periods the simulation will last, but indicate a three to five period potential. You can determine the number of periods based upon how the simulation is going and what you want to accomplish.

This simulation also serves as a group building exercise during the second week.

After the reports there might be a tendency on the part of the participants to regard the rest of the week as anticlimatic. The simulation helps to keep the group active and lively, and helps to keep the participants headed toward the climax of the workshop -- the back-on-site action plans of the volunteers.

The appendix contains suggestions of some modifications that you might use for the second simulation.

Note: Be sure to duplicate enough copies of the guides for consumers, processors, and producers to conduct the simulation twice during the workshop.

IX. ALTERNATIVES IN PREVIOUSLY IDENTIFIED MARKETING SITUATIONS

Exercise I-G, Identifying Situations in Marketing, allowed the participants to begin talking with each other about the marketing system, and identify situations they perceive to be constraints or barriers to smoothly functioning marketing systems.

At this time the participants may have different perspectives on these situations, and perhaps some ideas on alternatives or possibilities for overcoming these barriers.

Objectives: The participants will be able to identify several possible solutions or alternatives to overcoming selected barriers, chosen from the situations identified by the group earlier.

Techniques: Small group work, and reporting back briefly to the total group.

Materials needed: Items identified the first day of the workshop as barriers or constraints.

(Divide the larger group into small groups, assign each of the small groups a situation, and ask each group to spend 15 to 20 minutes identifying possible solutions to share with the larger group.

After the groups have had time to work, ask each group to present, in about a 15 minute time period, the possible alternatives and solutions derived by the group. While you are under some time constraints, you need to encourage the group to question, add to, or discuss the solutions presented.

There are three sample worksheets in the appendix that pertain to this exercise. They were used with the participants in one pilot workshop, and may either be used as is, or modified to meet the needs of your group. You may want to write the questions out in longhand on sheets of paper, and hand them to the groups involved, since the number of groups will be small, rather than duplicate the sheets ahead of time, without knowing what barriers or situations will be identified.

A list of situations identified in both pilots is also included. This list may enable you to anticipate some of the situations other groups may identify.)

X. ROLE OF A PEACE CORPS VOLUNTEER IN AGRICULTURAL MARKETING

(As a facilitator you are most interested here in acquainting the participant with the helping process. You will want to give the Peace Corps volunteer familiarity with tools for initiating and implementing change in the marketing system. At the same time, the Peace Corps volunteer must work compatibly with the client system to bring about that change with a minimum of conflict and a maximum of helping the client system help itself.

Another important concept for you to assist the Peace Corps volunteer in recognizing is that change comes slowly. Every professional helper is frustrated by the slowness with which change comes about. But for some of the volunteers, planting the seed of an idea in the mind of a key individual may be the most important thing that the Peace Corp volunteer can accomplish during his stay in the field. The real change may come about much later, as the result of initial work done by the Peace Corps volunteer.)

A. Signs of opportunity and location within the system

Objectives:	Each Peace Corp volunteer should be able to identify at least one possible opportunity for improvement based upon previous investigation in the workshop. If he is not sure of its relevance within his local situation, it should have the possibility of investigation upon return to the field.
Techniques:	Individual and small group work, forum.
Materials needed:	Handouts #22, 23, & 24; newsprint pad and easel; markers; masking tape.

(This is the time when participants can bring together all of the preliminary work on the learning contract worksheet, all of the research they compiled throughout the course, and identify opportunities in a system context.

Your role at this point is to help the identify areas of stress and/or constraint in the system and begin to translate them into opportunities.

Handout #22, Choosing Entry Points for Improvement of Agricultural Marketing, can be a starting point for this discussion. This segment of the course is oriented toward allowing the participants to identify their own role in improving the marketing system, identifying problems on which they can have some influence, and possible entry points for them.

The opportunity to work on their own or in combination with others and share adequately with the total group what they are planning will be very important at this stage. While you don't want to duplicate training they've had previously in the social action process, or in the process of establishing a consultant-client [helping] relationship, an opportunity to discuss some of these relationships needs to be provided, so they understand the framework for bringing about planned change.

You might want to simply put up on newsprint the steps in the social action process, and use handout #22, also on newsprint to remind the group that there are processes that relate directly to their role as a facilitator of planned change, and to their relationship with a client system. Information in the appendix pertains to the steps in the social action process. This may be used as a handout, or simply put on newsprint and use with the group.

With those steps in front of them you then have the opportunity for discussion if desired. Some of the group may want to talk about it, while others won't. Rather than present it as subject matter, you might remind them that they were probably exposed to these processes in training, and they should form the framework for the back-on-site action plan they will be working on.

You might want to review handout #22 in terms of how you as a facilitator modeled these steps prior to or during the workshop, so the group will realize that workshops or change efforts don't just happen. They are purposeful efforts to involve the client system in a change effort that takes the system's objectives into account.

This may be the time participants need to sort out how their perspectives on agricultural marketing the first day of the workshop compare with their perspectives now. You can choose some of the common situations identified earlier for brainstorming solutions in small groups, and discuss them in the larger groups.

Signs of opportunity may be based upon conversation with market participants, observations of the market, etc. You will need to assist the members of the group to first identify individually signs of problems and then move to the next step to identify what the actual problem may be, and where it exists. Then redefine it in a positive sense.

As facilitator, you need to spend some time helping the group decide where there is some realistic input possible from a Peace Corps volunteer. Sometimes change starts as the first of a sequence of steps leading to a more complex goal. As the facilitator you can help the group and individuals within the group make these decisions.

After discussion and conclusions about problems that can be influenced by efforts of the Peace Corps volunteer, individual or small group work may be needed to define his local problem or situation (handout #23).

At this time, the group needs to move into defining for their lcoal situation, what positions and specific people are involved.

Encourage the participants to identify relationships between these actors, and identify their accessibility to the Peace Corps volunteer and the rest of the system, their linkage to the rest of the system, and their openness or susceptibility to change.

It might be useful to the group to take some of the actors identified and brainstorm some of the rewards that actor would receive either as a result of making a change, or as a result of not making a change.

This might help determine how that actor could be approached in terms of initiating change.

As you move through the different headings of handout #23, you need to be sensitive to the needs of the participants to work on their own or in teams, and to come back into the larger group to try out ideas.

Pairing individuals to help them practice facilitator skills, in assisting each other to zero in on specific opportunities and plan strategy, might be useful at this time.

You might ask the group to work as individuals on handout #23 down to relationships between actors. Then ask them to use masking tape and tape their worksheet up where others can see it. Allow some time for the group to read what each other is planning. Then ask that they pair themselves [or three if necessary] and work through the rest of the worksheet.

You will need to allow at least two hours the last day to give each individual time to report on his/her planned efforts. Also allow suggestions, questions and resource sharing. You may want to encourage each person to give only highlights of his/her plan.

As the course comes to a close, if you have done a good job of facilitating, there will probably be a strange mixture of emotions on the part of the participants, sorry to leave each other, and yet eager to try new knowledge and skills.

One of the simple ways of finding out what is in the minds of the participants at the moment the course ends is to ask each of them to take a blank sheet of paper and write an evaluation of the course.

This may be a way of verifying your own ideas, or finding elements of the module or of your own facilitation behavior that need changing before the next course.

A page in the appendix contains various areas where you might wish the participants to give you specific information.)

Handout #22

ASPECTS OF THE CHANGE AGENT'S ROLE IN BRINGING ABOUT PLANNED CHANGE*

1. Diagnostic clarification of the problem
    - A. May keep diagnosis to self
    - B. May share diagnostic responsibility with the client system

2. Assessment of the clients system's motivation and capacity to change

3. Assessment of the change agent's motivation and resources
    - A. What's he/she getting out of it
    - B. What can he/she reasonably be expected to contribute

4. Selecting appropriate change objectives

5. Choosing the appropriate helping role
    - A. Mediating and stimulating new connections within the client system
    - B. Presenting expert knowledge on procedures
    - C. Providing strength from within
    - D. Creating special environments
    - E. Giving support during the process of change

6. Establishment and maintenance of the relationship with the client system
    - A. Need for adequate sanction
    - B. Clarifying expectations about the change relationship
    - C. Regulating the intensity and quality of the helping relationship

7. Recognizing and guiding the phases of change
    - A. Client system discovers the need for help, sometimes with stimulation by the change agent
    - B. Helping relationship is established and defined
    - C. Change problem is identified and clarified

---

*Adapted from Lippitt, Ronald; Watson, Jeanne; and Westley, Bruce. The Dynamics of Planned Change, Harcourt, Brace & World, Inc. New York, 1958.

- D. Alternative possibilities for change are examined; change goals or intentions are established
- E. Change efforts in the "reality situation" are attempted
- F. Change is generalized and stabilized
- G. The helping relationship ends or a different type of continuing relationship is defined

8. Choosing appropriate specific techniques and modes of behavior

9. Contributing to professional development by research and conceptualization

Learning Guide - Planning

This worksheet is prepared as a planning tool for you to use in developing possible action plans for your own use.

Signs of problem/potential opportunities and location within the system:

Definition of local situation:

People or positions involved (actors):

Relationships between actors:

Objectives:

Long range:

Short range:

Learning Guide - Planning

Activity or steps you will take (in sequence and time frame involved):

Resources available:

How will you know when objective is reached?

CHOOSING ENTRY POINTS FOR IMPROVEMENTS IN AGRICULTURAL MARKETING

As a Peace Corps volunteer, you are a "professional helper". A professional helper is a person who works with a client system--an individual, a group, an organization, or a community, using a problem-solving or opportunity-discovering process, to bring about more satisfactory functioning of parts or all of the system.

That definition sounds sort of esoteric, but is really very practical. Examples of professional helpers working with individuals include the clinical psychologist, the social worker, or the marriage counselor. Groups seek help from trainers, staff consultants, conference experts, etc.

Similarly, organizations faced with problems can consult productivity analysts, labor relations consultants, etc.

On a community level, extension agents, community development specialists, adult educators, and other community-oriented professional helpers use an identifiable problem-solving process in working with the client system.

A whole curriculum could be taught based upon the commonalities of this process, and the appropriate role of the professional helper. This quick look at the process is designed to help you think about entry points for you as a professional helper in making effective contact with the client system.

You are interested in working as compatibly with the client system as possible, helping it to identify problems as potential opportunities, arrive at solutions and devise strategies, and in the process increase its own ability to solve problems connected with the entire PMC system.

The entry point concept is based on the idea that there may be specific points within the system, or specific people who are more constructive for you to work with than others, in helping the system help itself. These entry points are really the starting points of your professional help-giving program.

Your entry point might be thought of as a strategically-placed unit within the system, that has the ability to influence other parts of the system. In this case, you might ask questions such as: With whom should I talk first? Who can be expected to do the most work in the beginning? Who should be drawn into the effort before it is completed?

You can use this information to decide which person or group within the system will be your best ally in taking the first step.

Your entry point may also be thought of as an aspect of the client system's existence which would be changed by your efforts. This might be one part of a system's functioning, which when changed, brings about a sequence of other changes, eventually resulting in different relationships within the system.

Whichever way you regard your entry point, these two possibilities suggest that choice of an entry point is governed by two characteristics--accessibility and linkage.

Accessibility suggests that the entry point must be accessible to you and those working with you, at least accessible enough to permit entry.

Linkage suggests that there must be some possible connection between the people or point you choose and the goal or change objective.

The entry point should possess susceptibility or openness to change and be somewhat responsive or receptive to new ideas or to your influence.

The ideal entry point would be one that could trigger desired change in other parts of the system, leading to the desired marketing improvement.

You must continually keep two characteristics of your work as a professional helper in mind.

First, remember that in a system, parts of the system relate to one another. A change or intervention in one part of the system will bring about responses from other parts of the system. As you work with one part of the system to improve its functioning, you must be constantly aware of the probable response you will trigger in other parts of the system.

Another characteristic of the work of a professional helper is that change rarely comes as fast as we would like it to. Systems tend to maintain equilibrium and need time to adjust to changes.

The seed of an idea planted today may not sprout for several years, and you must be able to deal with your own frustrations as you realize the agonizing slowness with which change is brought about.

APPENDICES

Visual #1 - Experiential Learning

(Pertains to Section I)

Content

Experience
Written Material → Discussion → Application
Simulation

Experience, Written Material, Simulation → Discussion, Exploration → Application

I. THE PMC SYSTEM APPROACH TO NEW CROPS

A. CHARACTERISTICS OF THE PMC SYSTEM

1. PMC System Development

A Production-Marketing-Consumption (PMC) System, portrayed in Figure 1, ties together the individuals and institutions which plant, nurture, and harvest the crop (Production); those who collect, process, store, transport, distribute, and sell the crop products (Marketing); and those who buy and consume the products (Consumption). In most cases, there are a large number of products, a much smaller number of marketing channels, and a large number of consumers. The consumers may be individuals at the retail level, or they may be industrial concerns which utilize the crop within a compound product or as an agent in some industrial process.

Crop introduction takes place by the generation and expansion of a PMC system. Crop PMC systems continue to develop (to change, expand, and differentiate) after a crop has become established, but in the early stages, crop introduction and PMC system development are synonymous. Crop introduction is understood here to include also a major expansion (to significant economic status) or major change in utilization of an established crop.

Initiation and expansion of production is made possible by domestication of a plant previously harvested from natural stands (jojoba, guayule), domestication and utilization of a previously unused plant (crambe), importation of an exotic crop (kenaf, pigeon pea, grain amaranth), change to a new use of an existing crop (kenaf - change from use for cordage fiber to use for paper pulp; soybean and sunflower - change from forage to oilseed use), commercialization of a crop previously grown primarily for home use (avocado, grain amaranth), or some combination of these coupled with an appropriate increase in area of production or increase in yield or both. The area of production can be increased by displacement of other crops, change to multiple cropping on existing land, or conversion of other land to crop use.

Initiation and expansion of consumption is made possible by substitution of the new crop product for some other domestic product (kenaf), import substitution (guayule, kenaf, crambe), export of the new crop product (sunflower), satisfaction of previously unsatisfied demand (pigeon pea, grain sorghum), expansion of demand (pigeon pea, grain sorghum), expansion of the geographic market area (avocado - change from local to national distribution), or development of demand for higher quality of new products (jojoba, grain amaranth, soybean).

Initiation and expansion of marketing is made possible by reassignment of existing facilities and institutions or construction and development of new facilities and institutions. New facilities may be needed because of special characteristics and requirements of the new crop products or because the areas of production or consumption or both are distant from existing facilities. Of the three marketing phases, processing is most likely and distribution least likely to require special facilities. The procurement phase is most likely to rquire new linkages and organizations.

Research and development efforts commonly general embryonic PMC systems that consist of the production, processing, and consumption inherent in plant breeding programs, other agronomic research, seed multiplication, processing research, product development, market testing, etc. Such systems are not economically viable; they are entirely dependent on research and development activities of various organizations that may not be fully coordinated; but they do provide valuable information and experience for revision and refinement of postulated PMC systems and eventually for creation of the first commercial PMC increment.

2. Consumer Demand

The core feature of a functioning PMC system is a flow of goods in response to economic demand for the end product that is great enough to activate all of the necessary functions of the system. Consumer demand for the end product is of crucial importance for the profitability of the system and the volume of flow. At any given volume, the price paid by consumers must produce a satisfactory economic return in all levels of the production and marketing subsystems. The price consumers are willing to pay tends to decrease with increasing volume, thus the volume of flow can increase only up to a price level that is acceptable to the production and marketing subsystems. Industrial consumers commonly require high volumes, high quality, and reliable supply.

At a given price level, profitability is controlled by costs of production and marketing. Reductions in cost that make lower consumer prices acceptable allow greater volume of flow. Thus, both reductions in cost and increases in demand permit increases in volume of flow. Increases in demand result from restriction of imports, replacement of competitive products, technological developments that call for new products, changes in consumer tastes and preferences, development of export markets, expansion of economic activity, population growth, or some combination of these. Reductions in cost may result from more efficient processing, utilization of by-products, more efficient farm machinery, improved cultivars (with higher or more reliable yields or both, pest resistance, characteristics that facilitate harvest, etc.), improved storage and handling technology, etc. Relatively minor changes in demand or costs can lead to major changes in volume of flow. Such changes have been called "key catalytic events".

3. Coordination

The subsystems and phases of a PMC system, of necessity, are always very nearly in balance at a level of activity that corresponds to the volume of flow through the system. When the volume of flow is relatively large, an increase in capacity or activity at some level of the system will generate market signals that call forth corresponding expansion at other levels throughout the system. On the other hand, when the volume of flow is relatively small or even zero, the successful implementation of an addition to the system at any level must be coordinated with corresponding additions at all other levels. That is, a successful addition must be part of a full PMC increment that provides for flow of goods from producer to consumer.

The coordination necessary to effect a functioning new PMC increment can be achieved by dependence on market signals to recruit actors whose response can be reliably predicted and readily controlled, simplification of the system and reduction of the number of linkages between levels and performance of the functions of one level by actors of another level, contracts or other agreements between actors of different levels, and formation of other linkages. Linkages are connections between or among levels of a PMC system that transmit information, guarantee performance, or provide vertical influence or control. Linkages include information services, interest groups, commodity organizations, contracts, and other devices.

The structure of the PMC system, as determined by the nature of the crop, the crop products, and their utilization, very largely controls how coordination can be achieved and at which level actors have the necessary discretionary power to influence and control actors at other levels as necessary to implement a new PMC increment.

4. Initiation

The power to implement or to initiate implementation of a new PMC increment is concentrated in those levels in which the elements must be relatively large for efficient performance of the necessary functions, are specialized and not readily converted from or to other uses, require long-term commitments, require large investments, and entail high risk. Potential actors in other levels in which the elements are relatively small and relatively flexible are very largely dependent on the decisions of more powerful actors to implement a PMC increment.

A realistic implementation strategy, then, requires a prediction or postulation of the PMC system structure to identify concentrations of power to initiate implementation, intermediate PMC system levels that can be eliminated temporarily, functions that can be assumed by actors in one of the essential levels, actors whose response can be predicted and controlled readily, necessary linkages that must be made through formal agreements, etc.

For crops (such as guayule and kenaf) which require extensive, expensive, and specialized processing, processors may be the key actors for initiation of a new PMC increment. Large industrial consumers may be the key initiators for systems in which the consumer product (crambe oil) is an industrial feedstock. Large producers or organizations or producers may be able to initiate PMC systems which require simple or no processing (jojoba, pigeon pea) or for which processing can be borrowed (crambe). In many cases distribution can be borrowed; that is, an existing distribution subsystem for a number of other products can be utilized for a new product. Procurement tends to be eliminated as a separate activity in new PMC increments by direct transactions between producers and processors, distributors, or consumers.

Some of the most promising potential new crops present difficulties for crop introduction much greater than those for many established crops. The type of utilization is particularly important. Direct human use (pigeon pea) and livestock use (jojoba and crambe meal) are easier to establish than indirect use (guayule, kenaf, jojoba oil, crambe oil, grain amaranth) of the crop product as an industrial feedstock, supply, or ingredient for some secondary or tertiary product. Likewise, utilization of the fresh or preserved plant material is easier to establish than utilization of a more highly processed material.

With respect to the level of crop culture, a new crop must move almost immediately to cultural control of selected varieties or to crop breeding plus cultural control to meet the demands of modern, high-technology agriculture. Many established crops progressed gradually from harvest of natural stands to simple propagation and eventually to use of fertilizers, irrigation, drainage, and pesticides as well as selection of varieties and modern plant breeding.

The degree of commercialization (number and complexity of transactions) is probably less important in establishment of a new crop PMC system. As indicated above, systems tend to be reduced to a minimum of transactions when they are first generated and to assume more elaborate and complex procurement and distribution subsystems as production, processing, and consumption became well established.

Other factors that determine the complexity of the PMC system to be developed and the difficulty of its establishment include the time required for return on investments, the degree of similarity to other crops and crop products, and the scale of activity required for efficient performance of essential functions. Always assuming the essential condition of overall profitability, the simplest PMC systems to develop are for annual crops, similar to other crops in production requirements, that have fresh or easily preserved products of obvious utility (such as human food or livestock feed). The most difficult systems are for perennial crops that have unique production requirements, require extensive and expensive processing of a unique kind, and that yield refined products of value primarily as feedstock for industrial use. Potential systems for which all or most components can be borrowed are more easily developed than systems that require special new technology, inputs, functions, practices, or institutions. Systems that can be started at a small scale without long-term commitments are more easily developed than systems that require a large-scale unit at some level and hence require large investments at considerable risk. The PMC systems of many traditional crops are relatively simple (or were at the time of establishment). Some potential new crops, such as pigeon pea, also may have simple systems, but others, such as kenaf, guayule, jojoba, and crambe, will require complex and difficult systems.

5. Borrowing

Borrowing from existing crop PMC systems is a major device for the establishment of a new system. Creation of new elements (or recruitment of new actors), new inputs, new input supply systems, and new linkages is much more difficult than conversion of existing facilities and institutions. Nevertheless, borrowing does have significant costs. The new crop must compete with the crop that is displaced; there is an opportunity cost for transfer of the component. In many cases, borrowing requires modifications and adjustments, possibly extensive and expensive ones. Fully as important, new crops have no performance record and risks are unknown. Entrepreneurs must assume that risks are high and demand higher estimated economic returns than for established crops to assign financing and management efforts to a new crop.

6. Role of Government

Governmental activities can play an important role in the development of a new crop PMC system. Most exploratory research and much development research on potential new crops is carried out by government (including tax-supported universities). Acreage and production controls on existing major crops have made farm land available for expansion of new crops. Programs that establish grades and standards, support the formation of farmer cooperatives, and provide for the creation of commodity marketing orders have been important for the expansion of PMC systems for some new crops. On the other hand, restrictions on the use of pesticides is a major deterrent to the adoption of new crops, particularly those to be used for food. Direct subsidy or direct government participation in a PMC system is possible. Ironically, although government-supported exploratory research apparently has been crucial for the introduction of new crops, government support of agricultural production research seems to increase as a successful PMC system expands and commodity groups develop.

B. PMC SYSTEM METHODOLOGY

1. The PMC System Decision Matrix

The decision matrix (Figure 2) is a diagnostic tool for identification and evaluation of the status and prospects of a specific PMC system. It is based on the conceptual framework presented in the previous section that identifies three subsystems (production, marketing, and consumption) and divides the marketing subsystem into procurement, processing, and distribution phases. It recognizes the inputs and outputs at each level as well as the overall institutional, social, economic, and political environment within which a PMC system operates. Functions, elements, and actors within each phase or subsystem are identified. The PMC system structure is flexible enough to reflect the nature of the crop being studied.

The matrix permits each of the systems components to be evaluated in terms of physical (including technical) possibility, economic feasibility, and institutional permissibility.

Collectively, 40 components are defined to identify the most crucial issues concerning inputs, functions, and elements relative to the current status and future prospects of a specific PMC system. It accomodates a numerical rating as to the degree to which some 120 variables do or do not constrain further development of the particular crop PMC system being examined.

The PMC system decision matrix can be applied at any time before or after the initial functioning of a PMC system. For any potential new crop it can be used both to evaluate its present stage of development and to determine the crop's potential development.

The matrix can be used to examine the physical possibility of a particular component functioning in a new crop PMC system. Some components may already be available due to preassessment activities and others may be borrowed from PMC systems for existing crops, e.g., fertilizer requirements can be satisfied by the same suppliers that serve other crops in a given area. However, if the component cannot be borrowed and, hence, must be developed, an assessment can be made regarding the difficulty of doing so.

If the decision matrix indicates that it is physically possible to perform the function required of the component, then the component is evaluated in terms of economic feasibility and institutional permissibility. The former requires that the function be performed as profitably for the new crop as for other uses to which the resources can be allocated. The latter requires that neither legal nor sociological obstacles hinder the component's establishment.

2. Assessment of PMC Stages of Development

Five stages of development of new crop PMC systems have been identified. The steps proposed to advance through these stages to accomplish the introduction of a new crop are listed below, roughly in chronological order. These steps apply the models, techniques, and instruments developed by SaLUT. Some of these steps can be carried out by business firms that intend to become a part of the production or marketing subsystems. Some can be carried out by potential consumers or input suppliers or others with commercial interests in the new crop. Others can be performed by governmental bodies or others in the interest of the general public good.

Examination of Potential

Step 1. Determine status and promise. Collect, synthesize, and analyze preliminary information about production, marketing, and consumption to evaluate the functions, inputs (particularly the available technology), elements, and linkages of the potential PMC system. Use of the decision matrix has been shown to provide a systematic approach for this determination. Sources of preliminary information are (1) judgments of selected experts; (2) preliminary estimates of profitability (such as the results from the systems assessment model); and (3) a review of scientific and popular journals for information about potential end product demand, potential methods of processing and distributing crop products, and crop production technology. The amount of information and the analysis of that information will identify the stage of PMC system development of the crop.

Crops in Stage 1, Exploratory Research

Step 2. Diagnose the most pressing needs for information based on analysis of Step 1.

Step 3. Promote communication and cooperation between research groups and share results of Steps 1 and 2.

Step 4. Carry out or support needed research.

Step 5. Review status from time to time, as in Step 1, and postulate a PMC system structure as early as possible so that the crop can advance to Stage 2.

Crops in Stage 2, Postulated System Research and Development

Step 6. Review and adjust the postulated PMC system structure.

Step 7. Identify obstacles, using the procedure of Step 1, determine the most important needs for information and technological and institutional developments to overcome those obstacles, and develop a priority schedule for problem-solving investigations and activities to generate remedial measures.

Step 8. Establish a cooperative information network for groups investigating any component of the system or with current or potential interest in any aspect of the system and guide research and development work toward the most important problems.

Step 9. Carry out or support needed investigations or activities.

Step 10. From time to time, review the status of the crop using the procedure of Step 1.

If major surmountable obstacles remain, return to Steps 6 and 9.

If no major obstacles prevail, proceed to Step 11.

Step 11. Carry out a pre-feasibility assessment of the prospective PMC system. Collect and analyze all available information. The Delphi technique has been known to be an effective way to consult all knowledgeable persons. Analyze the technical and economic feasibility of the system and establish a definitive information base for formulation of implementation strategy.

Step 12. Analyze the structure of the prospective PMC system to identify the key components for implementation and develop an interest group of the key individuals most likely and willing to take part in preparation and execution of a specific strategy for implementation of the prospective PMC system.

Crops in Stage 3, Decision and Investment

Step 13. Identify the business firms (or at least class of business firms) with the capability to initiate implementation of a commercial PMC increment.

Step 14. Carry out a general system feasibility study based on a definition of the PMC system and the first commercial PMC increment that includes estimates and predictions about geographic areas of production, type of farms, cropping system, production support services and supplies, nature of processing functions, processing facilities and inputs, nature of consumers, potential demand, and the nature and requirements of procurement and distribution activities. Much of the information needed for this step will be available from Step 11. The general system feasibility study identifies deficient components, develops remedies, and determines the costs and returns of these remedies. It also verified the overall economic feasibility at all PMC levels and identifies specific business ventures to be evaluated in Step 16.

Step 15. Continue or initiate consultations on specific implementation strategy for the PMC system.

Step 16. Conduct site-specific pre-investment project feasibility studies for the key business ventures of the prospective PMC increment. These studies are made to determine profitability as well as technical and institutional feasibility of site-specific investment projects. Particularly the key firms that seek to initiate implementation of a first commercial PMC increment, but also other firms at levels throughout the system, need to consider the measures necessary to ensure the supply and disposal of crop products and the supply of inputs. Appropriate measures may include supply contracts, forward contracting of sales, transportation and storage arrangements, commitments for financing, commodity group conference, etc.

Step 17. Carry out activities as necessary to solve problems identified in Step 11 and any other problems.

Step 18. Make capital investments, create or reassign functioning elements throughout the system as needed for flow of crop products from producer to consumer, provide for needed inputs.

Crops in Stage 4, Implementation

Step 19. Begin activities for flow of products through the first PMC system increment. Test and adjust all elements and functions.

Step 20. Continue research and development activities to increase efficiencies, capacities, and economic returns throughout the system.

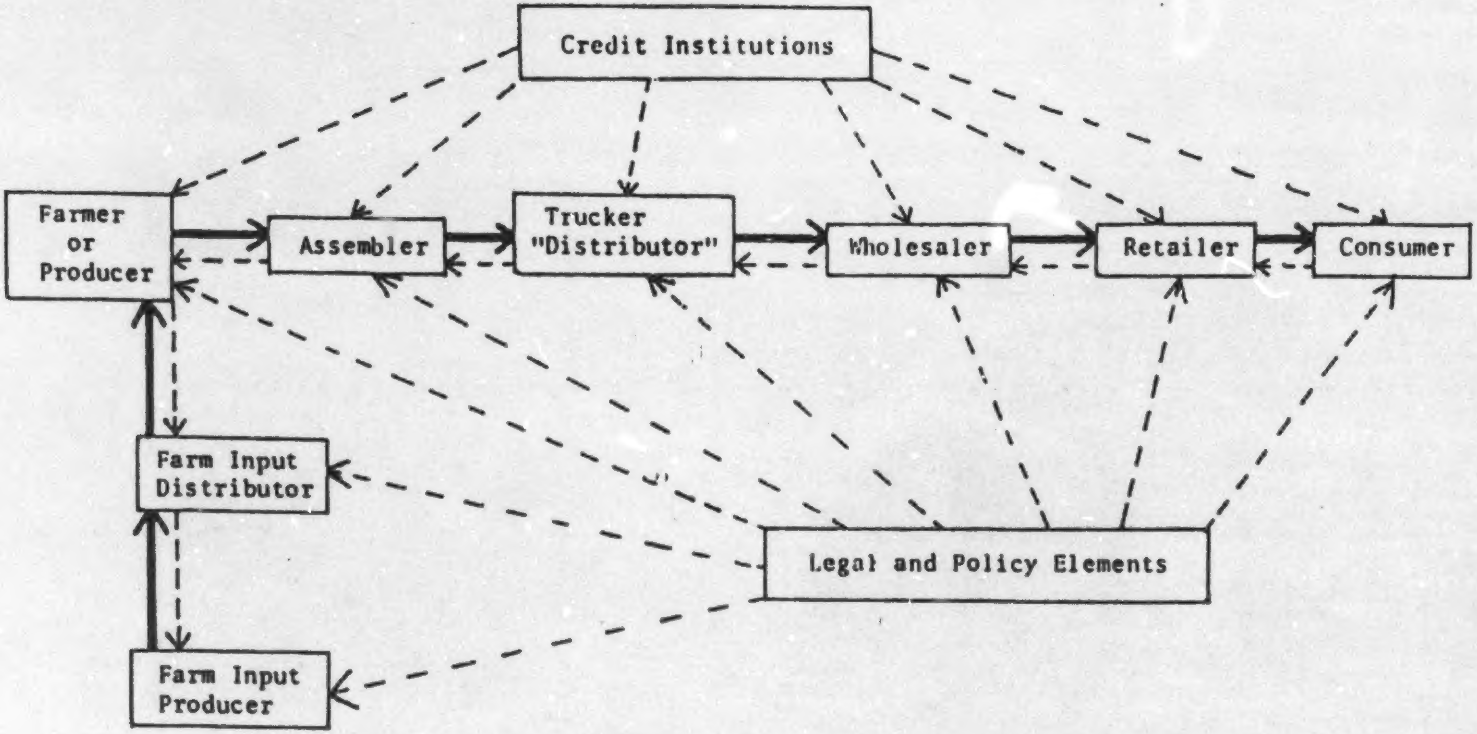
Step 21. Implement additonal increments by repetition of Steps 14, 15, 16, 17, 18, and 19.

Step 22. Continue consultation among representatives from all key components of the system to maintain approximate balance among the production, marketing, and consumption subsystems.

Step 23. Form appropriate commodity organization.

Crops in Stage 5, Stability

Step 24. Guide system activities, continue research and development, promote system interests.

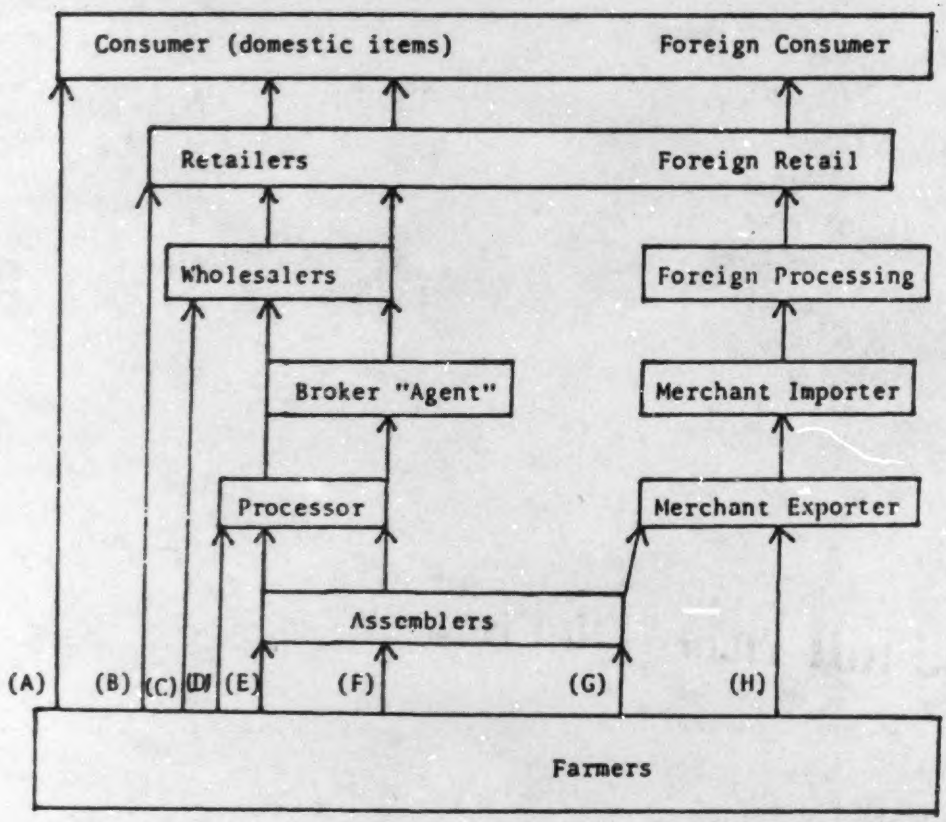

Credit Institutions
Farmer or Producer
Assembler
Trucker "Distributor"
Wholesaler
Retailer
Consumer
Farm Input Distributor
Farm Input Producer
Legal and Policy Elements

AGRICULTURAL PRODUCTION-MARKETING-CONSUMPTION SYSTEM

━━━━ Product outputs

– – – – Services, flow of information, inputs

Appendix #3


Consumer (domestic items)
Foreign Consumer
Retailers
Foreign Retail
Wholesalers
Foreign Processing
Broker "Agent"
Merchant Importer
Processor
Merchant Exporter
Assemblers
(A)
(B)
(C)
(D)
(E)
(F)
(G)
(H)
Farmers

SELECTED MARKETING CHANNELS FROM FARMER TO CONSUMER

How Should A Report Be Organized

Production

1. Overview
   - Plant description
     - Biological nature
       - Cereal
       - Routing system
       - Anatomy
     - Adaptation
       - Where found in area
       - Climatic requirements
       - Plant requirements
       - Soil requirements
     - By-product for plants
2. Present situation
   - Size of area being cropped
   - Size of area being harvested - current
   - Supply might not be totally utilized, or only used for home consumption
   - Current production practices
     - Preplant, planting and development, harvesting

Marketing of Product

- How is it currently being moved?
- Identify channels and facilities currently being used
  - A. Assembly
  - B. Processing
  - C. etc.
- Demand and supply
  - Types of current user or producer
  - A. Household consumer
  - B. Farmer
  - C. Institutional
    - School
    - Restaurant

Supply:

Who is it being produced by

Seasonality

Supporting institutions

Production Subsystem

Components presently missing but feasibility questionable

(i.e.) Financing of crop

Statement -- very little or no financing

Currently available due to

1. Lack of proven returns
2. Need long-term payback
3. Risk is high due to sensitivity of crop to climate (etc.)

Marketing information and institutions

A formal system is absent

A need for more information exists

To whom? farmers, middlemen, coop, consumer

Component presently is missing but resolution of problem is feasible

1. Land and water resources

   Availability of appropriate land; it has the suitable conditions for production

   a. pH level of soil can be raised
   b. Increase content of organic matter through adding biomass or animal manure

2. Risk taking and other managerial abilities

   a. Lack of experience
   b. Inconsistent yields
   c. Lack of appropriate technology

Components can be borrowed with adjustments

a. Farm organizations currently exist for rice can be used for new commodity or expending commodity

Components basically are in place -- these components do not appear to offer limitations for development

Objectives and goals for a future corn PMC system

Objective is to establish a functioning PMC system of sufficient magnitude to satisfy the village (barrio) present demand for fresh corn.

Additional objective is to provide small farmers (limited resource) with alternative profitability crop that uses low production inputs, little capital, or no additional investment capital for production and harvesting.

Situations Identified As Barriers to Effective Marketing

In Pilot Workshops

Farmer needs more bargaining power
Lack of ability of farmers to meet grades and standards
Quality of inputs - fertilizer, etc.
Taking temporary profit, not thinking of future
Transportation
Storage
Slice the middleman takes
Honest administrators
Market information
Disparities in margins

Market Information

Discuss the following questions and any others not mentioned that you feel are important in describing the problems of market information and possible solutions for the commodities in your site. Be prepared to discuss this with the group.

1. What types of commodities are grown in your area and for what purposes?

Commodity	Purposes (Home Consumption, Market Surplus, etc.)
a.	
b.	
c.	
d.	

2. What types of information outlets are available for those commodities mentioned in Question 1?

a.

b.

c.

3. With respect to Production, what types of information problems face the farmers or producers in your area?

a.

b.

c.

d.

e.

With respect to Marketers, what types of information problems face the farmers or producers in your area?

a.

b.

c.

d.

e.

With respect to Consumers, what types of information problems face the farmers or producers in your area?

a.

b.

c.

d.

e.

4. What do you feel are the effects of the informational problems mentioned in Question 3 on farm production, market prices, and consumption?

5. What are some suggested solutions to resolving the informational problems discussed in Question 3 for the Producer, Marketer, and Consumer?

6. As a facilitator or change agent, how do you see yourself fitting into the opportunities surrounding information problems mentioned earlier?

Appendix #8

Storage

Discuss the following questions and any others you feel are important in describing the problems of storage on-farm and/or off-farm and possible solutions for commodities in your site. Be prepared to discuss this with the group.

1. What types of storage facilities currently exist for the agricultural commodities in your site?

   a.

   b.

   c.

2. What types of products are currently being stored and what are their purposes? (family consumption, marketing, other product uses, etc.)

   a.

   b.

   c.

3. What types of storage problems do you feel farmers are having or possibly will have if they store their crop/food-commodities?

   a.

   b.

   c.

   d.

Commodity	Storage Problem
(1)	
(2)	
(3)	

4. What are some of the effects of poor storage conditions or lack of storage facilities on farm income and price for those commodities listed above? (See Question 3)

5. What are some suggested solutions to the storage problems mentioned earlier?

   a.

   b.

   c.

6. As a facilitator or change agent, how do you see yourself fitting into the opportunities surrounding storage problems mentioned earlier?

   a.

   b.

   c.

Appendix #9

Transportation

Discuss the following questions and any others you feel are important in describing the problems of transportation in your area. Also list some ways you feel are possible solutions to overcome the transportation problem. Be prepared to discuss this with the group.

1. What type of transportation services currently exist for the agricultural commodities in your site?

   a.

   b.

   c.

   d.

   e.

2. What types of transportation services are currently available or are being used to bring agricultural inputs into your site?

   a.

   b.

   c.

   d.

   e.

   f.

3. List the main types of crops grown in your area that are sold in the market place and the types of transportation system used to move the commodity from farm to consumer?

Commodities	Method of Transportation
A.	
B.	

4. With reference to Question 3, when does title of ownership transfer?

   a.

   b.

   c.

5. What are some of the effects of a poor transportation system on the Production-Marketing-Consumption system?

   a.

   b.

   c.

   d.

   e.

6. What types of transportation problems face the farmer, or production subsystem, and the marketing subsystem?

   a.

   b.

   c.

   d.

   e.

7. What are some suggested solutions to the transportation problems discussed in Question 6?

   a.

   b.

   c.

   d.

   e.

   f.

8. As a facilitator or change agent, how do you see yourself fitting into the opportunities surrounding transportation problems mentioned earlier?

Dependable Supply Issues

1. What are the commodities and/or inputs in your area that have and do not have a dependable supply?

2. Is quality a concern surrounding these products or inputs?

3. What factors (economic, social, environmental, and/or cultural) do you see or believe are involved in affecting supply?

4. How would the lack of dependable supply of inputs and products effect a PMC system? (select an example, input or product)

5. How do your clientele view the problem of consistent quantity and/or quality of local commodities and inputs?

6. What types of problems do you predit would occur (socioeconomic, and/or cultural) if consistent supply was tried to be maintained?

7. What types of educational activities do you feel would be appropriate to address the issues of quality and dependable supply for the different commodities or inputs?

Organizational Structure of Buying and Selling

1. Discuss the buying and selling process for those commodities and inputs in your site. For example, how are they purchased and sold? E.g., volume, piles, per unit, processed, barter, cash, kina shells, etc.

2. What types of an organizational structure (buying & selling) exist at the village level for the different commodities and inputs mentioned?

3. What are some of the problems you feel exist in such an exchange system and/or organizational structure?

4. Does the buying and selling process change as the commodity moves through the marketing system for the different participants?

5. How does title of ownership transfer?

6. How do you see your role (educational role) as a "PCV" in improving the buying and selling process or organizational structure in the village and its relation to a marketing system?

Steps in the Social Action Process (Section X)

1. Definition of the Social System
2. Convergence of Interest
3. Prior Social Situation
4. Relevant Social Systems
5. Initiating the Idea
6. Legitimation
7. Diffusion
8. General Definition of Need
9. People Decide to Act
10. Formalizing Goals and Objectives
11. Deciding on Means
12. Setting Up the Plan of Work
13. Identifying and Selecting Resources
14. Carrying Out the Action Program
15. Evaluation Between Each Step and Final Evaluation
16. Continuation, Modification, or Termination

Since 1961 when the Peace Corps was created, more than 80,000 U.S. citizens have served as Volunteers in developing countries, living and working among the people of the Third World as colleagues and co-workers. Today 6000 PCVs are involved in programs designed to help strengthen local capacity to address such fundamental concerns as food production, water supply, energy development, nutrition and health education and reforestation.

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